DRUG & COSMETIC INDUSTRY

OCTOBER, 1952

FEATURE ARTICLES • •

PHARMACEUTICAL PRODUCTION & PRICES		462
PHARMACY IN PICTURES		464
FOUNDATION CREAMS AND LOTIONS	Harry Hilfer	466
COSMETICS AND DRUG STORES		468
A PHARMACOLOGIST LOOKS AT PROPRIETARY DRUGS	Dr. M. H. Seevers	470
A PHYSICIAN LOOKS AT PROPRIETARY DRUGS	Dr. Robert T. Stormont	471
URINARY ANTISEPTICS	Milton A. Lesser	472
QUALITY CONTROL IN COSMETICS	J. Ritner Weaver	474
INFLUENCE OF LAY PRESS ON PRESCRIPTIONS	William J. Doyle	476

DEPARTMENTS • •

KEEPING POSTED	Thomas R. Farrell	457
PACKAGING AND SELLING	Frazer V. Sinclair	479
DOIN'S		488
NEWS	Frank Child III	495
TRADE LITERATURE		505
MANAGEMENT FORUM	Francis Chilson	507
ADVANCING THERAPY	Milton A. Lesser	515
COMPOUNDER'S CORNER	Milton A. Lesser	519
PATENT THOUGHTS AND TRENDS	Thomas Cifelli, Jr.	523
READERS' QUESTIONS	Milton A. Lesser	527
PERFUMER'S SHELF	Milton A. Lesser	528
INDUSTRY'S BOOKS	Harry G. Kelbly	531
ANIMAL HEALTH	Milton A. Lesser	532
ABREAST OF THE MARKETS	Frank Child III	535

THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
MAX FRANKEL, Art Director

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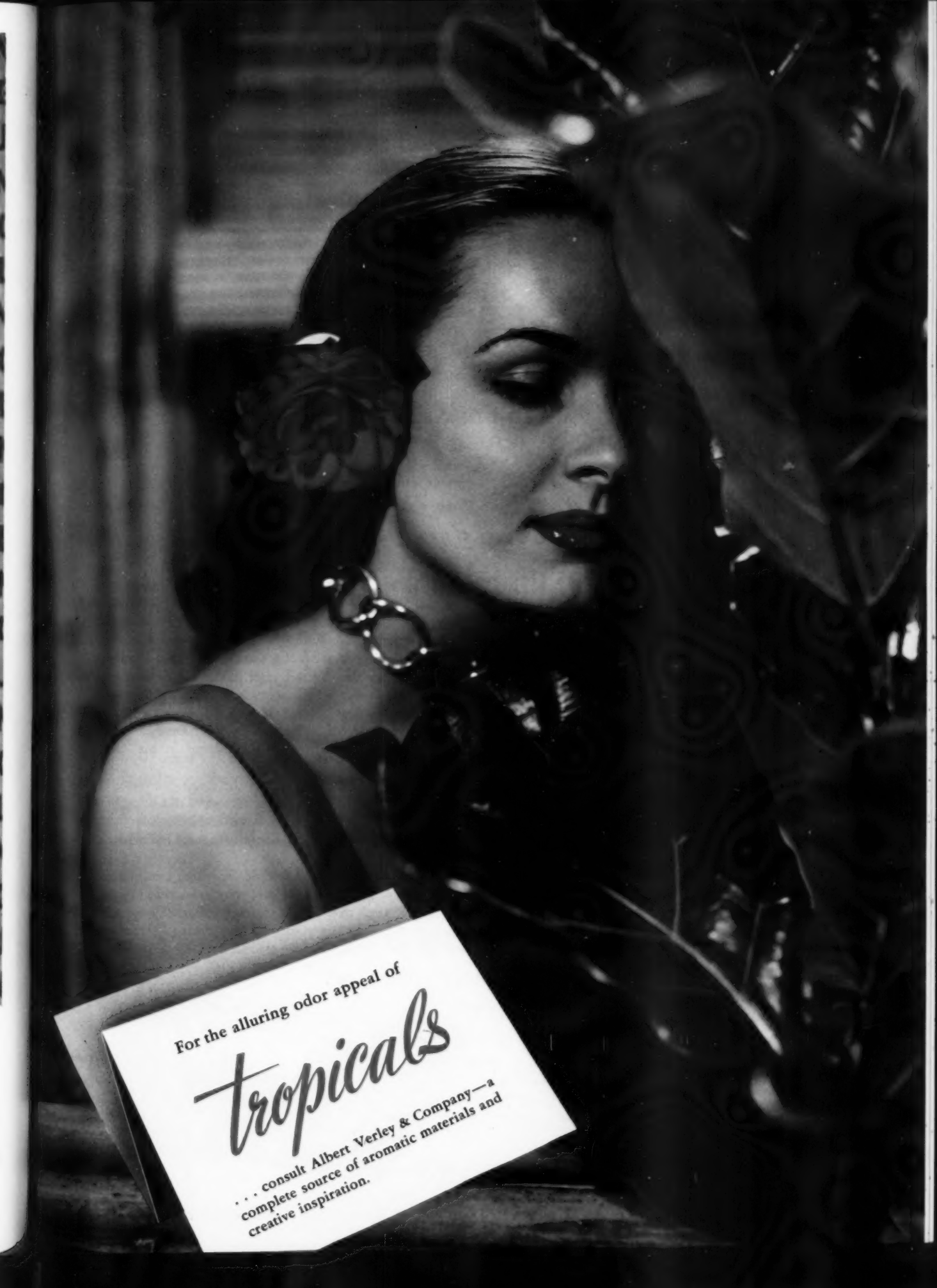
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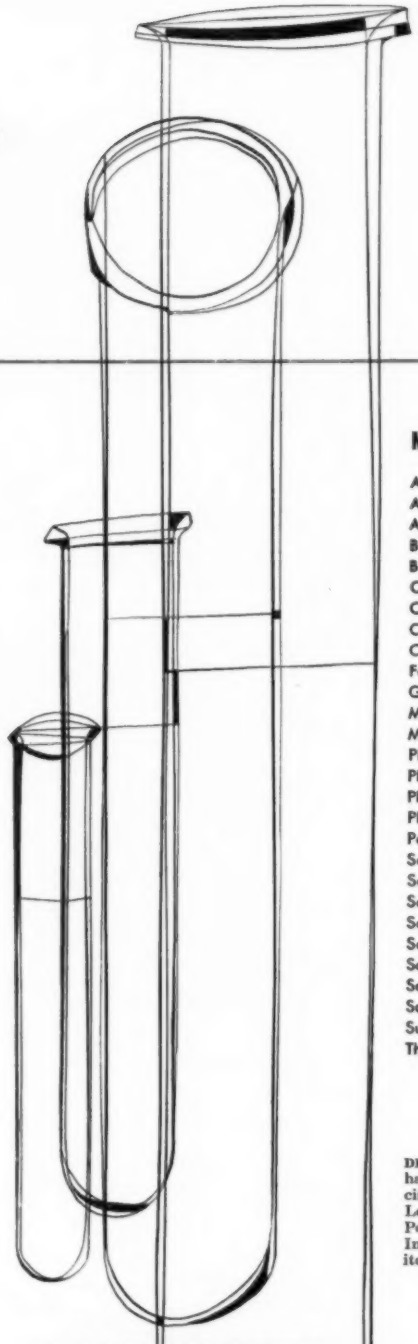

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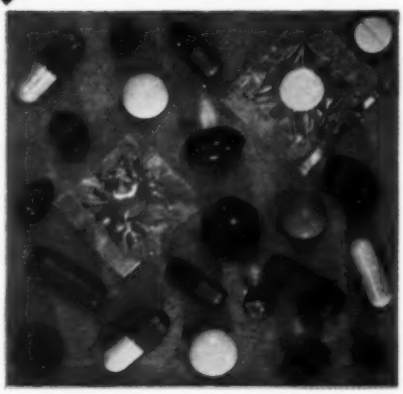

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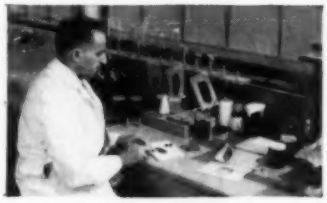

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U.S.I. CHEMICAL NEWS

October ★ A Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1952

ATTENTION

Users of Taxfree and Specially Denatured Alcohol

Now is the time for users of specially denatured alcohol to renew their basic permit (Treasury Department Form 1479) for 1953. It is also time for users of Taxfree alcohol to complete and file with the District Supervisor—Alcohol Tax Unit—their application (Form 1450) for renewal of their Taxfree Alcohol permit for 1953. If you require forms or any assistance in their preparation, please call your nearest U.S.I. office.

Handy Cross Reference For Govt. Spec. Colors Available from U.S.I.

U.S.I. recently made available, as an added service to paint manufacturers, a handy bulletin of cross references for the color designations contained in Federal Specification TT-C-595. This specification, entitled "Color Card Manual for Ready-Mixed Paints", is available from the Superintendent of Documents, Washington, D. C., for $1.50 per copy. Issued in January, 1950, as part of the Armed Forces unification program, it combines all equivalent government agency paint colors under a single new number and gives a color chip for each. The old numbers which have been replaced are not listed, however. U.S.I.'s new cross reference sheets fill in this gap and make the job of interpreting the new federal designations much easier. The sheets list all of the new colors by name and number, and give the former Army 3-1 Parallel, ANA Parallel, AN Camouflage Parallel, or other number, for each. Interested persons who have not already received copies of the bulletin may obtain them by writing their nearest U.S.I. sales division office.

Atomic Analytical Service Now Available to Industry

Industrial, scientific, and medical organizations were recently offered the service of what is described as a new and highly accurate method of using atomic energy to detect and measure impurities. Applicable to foods, pharmaceuticals, metals, and other materials, the new analytical technique involves exposing the test sample to neutron bombardment in a graphite reactor or "atomic furnace". Traces of impurities in the material are thus made artificially radioactive and their exact quantities can then be measured with highly sensitive instruments and detectors specially developed for atomic energy use. The method is claimed to be capable of detecting and measuring trace elements too slight to be determined by other chemical or physical means. It is also reported to be more specific than other techniques because the isotopes produced have individual characteristics as to modes of decay and types of radiation. These characteristics are never duplicated exactly in any other isotope, it is said.

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U.S.I.'s Permanent and Super Pyro Anti-Freezes Give Sub-Zero Protection and Prevent Corrosion In All Cooling Systems; Car Owners Should Act Now

October is the time when the automobile owner's anti-freeze problems are apt to materialize unexpectedly on some cold morning. Wise motorists are getting ready this month for the freezing weather they know is coming instead of waiting for the first, and often costly, evidence of Old Man Winter's appearance.

U.S.I. is again offering car owners complete coverage of all of their anti-freeze requirements with the two time-tested favorites, U.S.I. Permanent Anti-Freeze and Super Pyro Anti-Freeze. With automobiles more expensive than ever, the protection from cooling system troubles which these products give is more important than it has ever been. Realizing this, U.S.I. has made available this year, along with its famous anti-freeze products, data and information which will help dealers to serve their customers' cold-weather needs even more effectively.

Freeze-Proof, Boil-Proof, Rust-Proof

U.S.I. Permanent Anti-Freeze affords protection against freezing far down the sub-zero temperature scale, and being substantially boil-proof, it won't evaporate during warm spells. One filling lasts all winter. The product contains a carefully chosen combination of rust inhibitors which guards against

MORE

Plastic Makes Better Casts For Fractured Bones

A new plastic powder, now available to hospitals and doctors, may entirely replace the cumbersome plaster of Paris bandages used to keep fractured bones immobile, it is reported. In use, one can of the powder, which is sufficient for one arm or leg cast, is dissolved in a pint of warm water, a catalyst added, and the bandages dipped and applied. Casts made with the new material are stronger than plaster and can be made up to two-thirds lighter in weight. Even though they are thinner, the casts provide adequate immobility and support within a few hours of application, it is claimed. Another advantage cited for the new material is that the casts produced with it are porous enough to permit evaporation of moisture from the skin. High water resistance is also a feature—casts can be soaked for several days without disintegrating, the manufacturer claims.

A cooling reminder of what may be in store this winter. U.S.I. Permanent or Super Pyro Anti-Freeze in your radiator will help you avoid the leading role in a scene like this in the months ahead.

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effective than most other types of anti-freeze. It protects all seven metals in the automobile cooling system against rust and is free from unpleasant fumes.

Research Assures Continuing Improvement

A special section of U.S.I.'s technical development laboratory at Baltimore is devoted to a constant search for improved anti-freezes. Tests are continually made to measure effects of anti-freezes on metals, rubber, finishes, and any other materials with which they may come in contact. The research laboratory compiles accurate data on freezing points, boiling points, toxicity, fire hazards, and thermal properties of anti-freeze products. Research also serves to keep U.S.I. abreast of any changes in design of automobile cooling systems which might mean the altering of anti-freeze properties or formulations.

Use of Acetyl Methionine Heals Severe Leg Ulcers

Two French doctors have reported successful topical use of the acetyl derivative of DL-methionine to heal varicose leg ulcers which did not respond to conventional methods of treatment. The doctors found that acetyl methionine gave equally good results when applied directly in the form of 10 per cent methionine powder on an excipient of talc, zinc oxide or lactose. Excellent healing was also obtained when a 20 per cent aqueous solution of the sodium derivative of acetyl methionine was applied directly to the leg ulcer. In no case was there evidence of sensitivity to the product, according to the report.

Lacquer Gives Plastics Sand Blasted Finish

A treatment designed to replace sand blasting to give acrylic plastic surfaces a frosted finish has been developed. The product used is a lacquer, believed to be the first inexpensive and simple method for producing a sand blasted finish on plastics without actually sand blasting them. The lacquer can be applied by brush, dip, or spray. It is said to dry in three to five minutes at room temperature to give a smooth coating which is less inclined to hold dirt than a true sand blasted finish. The degree of opacity is easily controlled by varying the amount of lacquer applied, and since it is a surface treatment, thin sheets can be used, it is claimed.

Thallium Recovery

Two methods for recovering thallium, a rare element of increasing industrial importance, were announced in a recent government report. Although thallium is widely distributed in nature, it occurs in such minute quantities that it can be recovered only as a by-product in processing ores of other metals, it is said. The methods described in the report deal with the recovery of thallium from white arsenic by a process of volatilization, and from lead smelter flue dust by cyclic leaching.

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U. S. I.

To protect chrome plate, even when it has no underlying coat of nickel, a clear synthetic enamel is available which is claimed to have withstood laboratory salt spray and humidity tests for as long as a year. **(No. 851)**

A new plastic spray for windows of homes, offices, boats, and aircraft, provides a blue-green tint which cuts down glare and reduces heat from the sun, according to the manufacturer. **(No. 852)**

To waterproof fabrics without closing their weave, a silicone-type water repellent is on the market in an aerosol "bomb" container. Also applicable to rugs, upholstery, etc., the spray does not affect colors or stiffen the material, it is claimed. **(No. 853)**

An easily applied luminous paint, recently made available, is suggested for use on door knobs, house numbers, steps, switch plates, fishing plugs, and other places. **(No. 854)**

Screws can be held tightly in plasterboard, brick, wood, tile, etc., it is claimed, with new plastic plugs which, when driven into drilled holes, expand when screws are inserted. The plugs allow withdrawal and firm reseating of the screws. **(No. 855)**

To protect hands when inserting glass tubes and thermometers into stoppers, a neoprene manipulator has been marketed which eliminates the hazard of breakage and can be used with even irregular shaped tubing. **(No. 856)**

A new enamel for weather- and rust-proofing wire screens can be brushed or rolled on, does not clog the wire mesh, and dries to a fine luster in a few hours, the manufacturer states. **(No. 857)**

New chemically resistant diaphragm valves, claimed to be tough, odorless, tasteless, and nontoxic, can be used for handling many food products and corrosive chemicals, and can be serviced without removing from the line. **(No. 858)**

A new water demineralizer for small quantity users fits the water tap and utilizes a replaceable plastic cartridge of exchange resins which change color when exhausted. Reduction of dissolved salts to less than 0.1 ppm is claimed. **(No. 859)**

A new transparent, odorless, wax-type cutting oil for machine tool use is said to reduce smoking, to permit increased feeds, and to be free of all chemically active additives such as chlorine and sulfur compounds. **(No. 860)**

PRODUCTS OF U.S.I.

ALCOHOLS
Amyl Alcohol (Isoamyl Alcohol)
Butanol (Normal-Butyl Alcohol)
Fusel Oil—Refined
Propanol (Normal-Propyl Alcohol)

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof U.S.P., Absolute—200 Proof
Solox*—proprietary solvent—regular and anhydrous

ANTI-FREEZE
Super Pyro* Anti-Freeze
U.S.I. Permanent Anti-Freeze

ETHERS
Ethyl Ether, U.S.P.
Ethyl Ether, Absolute—A.C.S.

ACETONE—A.C.S.

ANSOLS
Ansol* M
Ansol* PR

ACETIC ESTERS
Amyl Acetate—Commercial and High Test
Butyl Acetate
Ethyl Acetate—all grades
Normal-Propyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
Diatol*
Diethyl Carbonate
Ethyl Chloroformate

RESINS (Synthetic and Natural)
Arochem*—modified types
Arodure*—urea-formaldehyde resins
Arofene*—pure phenolics
Aroflat*—for special flat finishes
Aroflint†—room temperature curing phenolic
Aroplaz*—alkyds and allied materials
Aropol†—copolymer modified alkyds
Ester Gums—all types
Natural Resins—all standard grades

INSECTICIDE MATERIALS
CPR Concentrates: Liquid & Dust
Piperonyl Butoxide
Piperonyl Cyclonene
Pyrenone* Concentrates: Liquid & Dust
Pyrethrum Products: Liquid & Dust
Rotenone Products: Liquid & Dust

INSECTIFUGE MATERIALS
Indalone*
Triple-Mix Repellents

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-chloroanilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloroanilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

FEED PRODUCTS
Calcium Pantothenate (Feed Grade)
Curbay B-G*
DL-Methionine (Feed Grade)
Niacin, U.S.P.
Riboflavin Concentrates
Special Liquid Curbay*
U.S.I. Vitamin B_{12} and Antibiotic Feed Supplements
Vacatone* 40

OTHER PRODUCTS
Collodions
Ethylene
Methionine (Pharm. Grade)
Nitrocellulose solns.
Propionic Acid
Pib*—Liquid Insulation
Special Chemicals and Solvents
Urethan, U.S.P.
Acetaldehyde
Propionaldehyde

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Division of National Distillers Products Corporation

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180 Varick Street • New York 14, N. Y.

New England Druggists Vote *American*

REPORT No. 2 of a series. *Watch for the next report.*

The Nation's drug stores continue to be checked for retail trade publication preference. This time every chain and independent druggist in New England was sent the questionnaire reproduced below. Their vote is shown at the right.

These results again emphasize the greater value the AMERICAN DRUGGIST offers its readers. They prefer the AMERICAN DRUGGIST because its new editorial formula gives them the kind of help and service they need today.

Your advertisement in AMERICAN DRUGGIST harnesses this peak reader interest for your product and message. To insure top dollar mileage for your trade campaign investment, buy AMERICAN DRUGGIST NOW!

THE SCHUYLER HOPPER CO.
ADVERTISING
TWELVE EAST FORTY-FIRST STREET · NEW YORK 17, N.Y. · LEXINGTON 2-3135

July 24, 1952

Dear Mr. Pharmacist:

Will you please give me a few seconds of your time to help me do a better job?

I am asked to make an important recommendation regarding drug trade publications.

I need your help to know how you and your fellow pharmacists currently appraise the drug trade publications you are receiving.

It will help me so much if you will answer the four questions on the enclosed pre-stamped post card.

Thank you for helping me.

Sincerely yours,

THE SCHUYLER HOPPER COMPANY

Herman A. Braunsiller, Jr.
Research Director

Enclosure
HAB/ecw

WHICH DRUG PUBLICATIONS DO YOU REGULARLY RECEIVE?

WHICH ONE OF THESE GIVES YOU THE MOST HELPFUL SUGGESTIONS PERTAINING TO YOUR PRESCRIPTION DEPARTMENT?

WHICH ONE GIVES YOU THE MOST HELPFUL IDEAS ON IMPROVED WAYS TO SELL MORE MERCHANDISE?

WHICH ONE GIVES YOU THE MOST HELPFUL INFORMATION ON YOUR FOUNTAIN OPERATION?

here's what was sent

NOTE: The questionnaire was not identified with any publication. A "write-in" response was required. Total mailing, 3,532. Return, 715 or 20.2%.

Breakdown by separate states available on request.

Druggist Tops!

here's how they voted

NEW ENGLAND SPOT-CHECK QUESTIONNAIRE
Mailed July 24, 1952

Question	Publication	Vote	Accumulative Vote (New England plus Ohio, Iowa, Oklahoma)
Which drug publications do you regularly receive?	Drug Topics	90.1%	89.3%
	American Druggist	88.7	87.8
	N.A.R.D. Journal	55.7	52.5
	Apothecary	35.5	12.6
	Chain Store Age	10.3	11.9
	Amer. Pharm. Assoc. Journal	10.3	12.8
Which ONE of these gives you the most helpful suggestions pertaining to your prescription department?	American Druggist	44.1%	42.3%
	Drug Topics	31.9	29.9
	N.A.R.D. Journal	10.1	10.2
	All Others	21.8	23.9
	No Answer	6.7	6.8
Which ONE gives you the most helpful ideas on improved ways to sell more merchandise?	American Druggist	50.1%	43.5%
	Drug Topics	35.8	34.4
	N.A.R.D. Journal	7.3	7.0
	Chain Store Age	7.0	8.1
	All Others	4.3	7.2
	No Answer	7.4	7.9
Which ONE gives you the most helpful information on your fountain operation?	American Druggist	30.8%	28.0%
	Drug Topics	25.3	19.5
	Chain Store Age	9.0	10.0
	Fountain & Fast Food Ser.	3.8	2.7
	N.A.R.D. Journal	3.6	3.5
	No Fountain	7.8	15.0
	All Others	7.3	7.0
	No Answer	16.8	17.4

American Druggist

Serving every independent and chain drug store ... and wholesaler.... every other Monday.

The Action Magazine

572 Madison Avenue, New York 22, New York

Chicago	San Francisco	Los Angeles
11 N. Wacker Drive	Mills Bldg.	2978 Wilshire Blvd.
Chicago 6, Illinois	San Francisco 4, Cal.	Los Angeles 5, Cal.

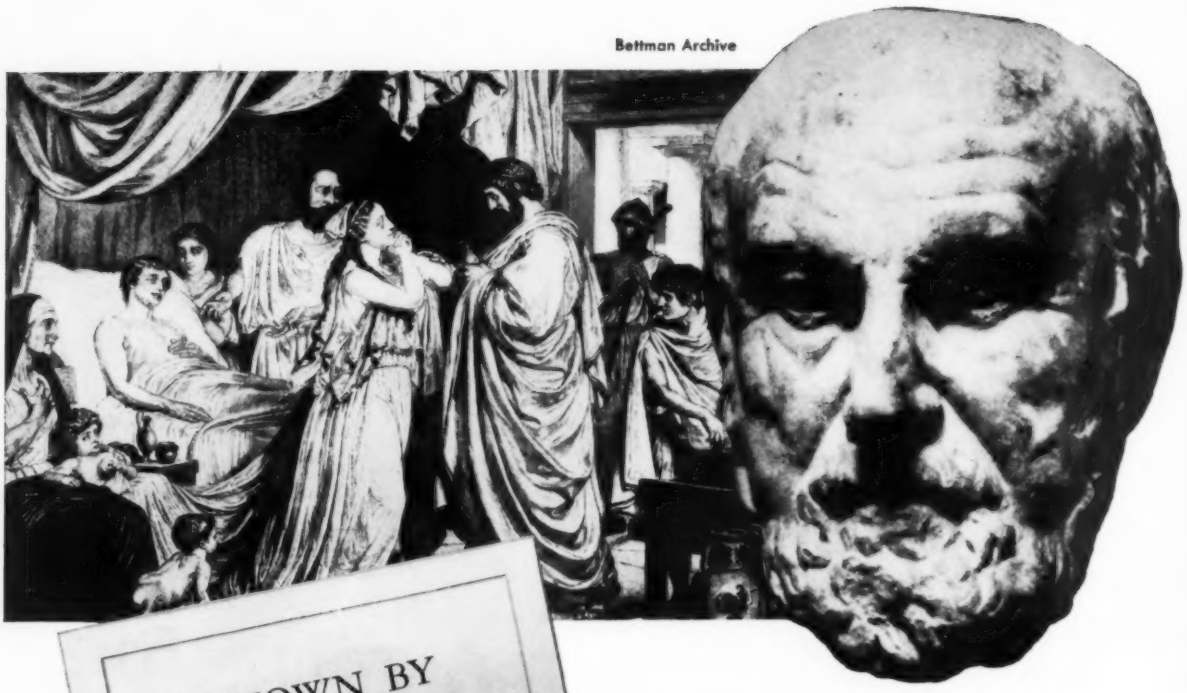
Advertisers Vote for American Druggist, too.

In the first 8 months of 1952 AMERICAN DRUGGIST showed a *gain* of 7.8% in advertising pages.

The second national drug trade publication showed a *loss* of .6% in advertising pages.

The third national drug trade publication showed a *loss* of 10.7%.

Bettman Archive



KNOWN BY REPUTATION

HIPPOCRATES (*Floruit 400 B.C.*) Celebrated Greek physician known as the "Father of Medicine." He authored the Hippocratic Oath which embodies a code of medical ethics still taken today by young men about to embark in medical practice. The chief therapeutic agents of the Hippocratic school were diet, medicinal waters, fresh air, and gymnastics. Photograph shows Hippocrates visiting a patient at a Patrician's home in Athens.

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SODIUM BICARBONATE

U.S.P.

Made to highest standards, Columbia-Southern Sodium Bicarbonate equals or exceeds every U.S.P. requirement. It meets your most precise needs for compounding or repackaging.

It is noted for its purity, whiteness and uniform screen size. Produced in powdered or granular form.

Specify Columbia-Southern Sodium Bicarbonate U.S.P. . . . known by reputation.

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CONTROLS VISCOSITY, ENRICHES FOAM!

CLEANER, MORE MANAGEABLE HAIR!

New information on the use of cellulose gum
(Hercules® CMC) is now available upon request.
Based on recent research findings from Hercules and
Foster D. Snell, Inc., it lists the special advantages
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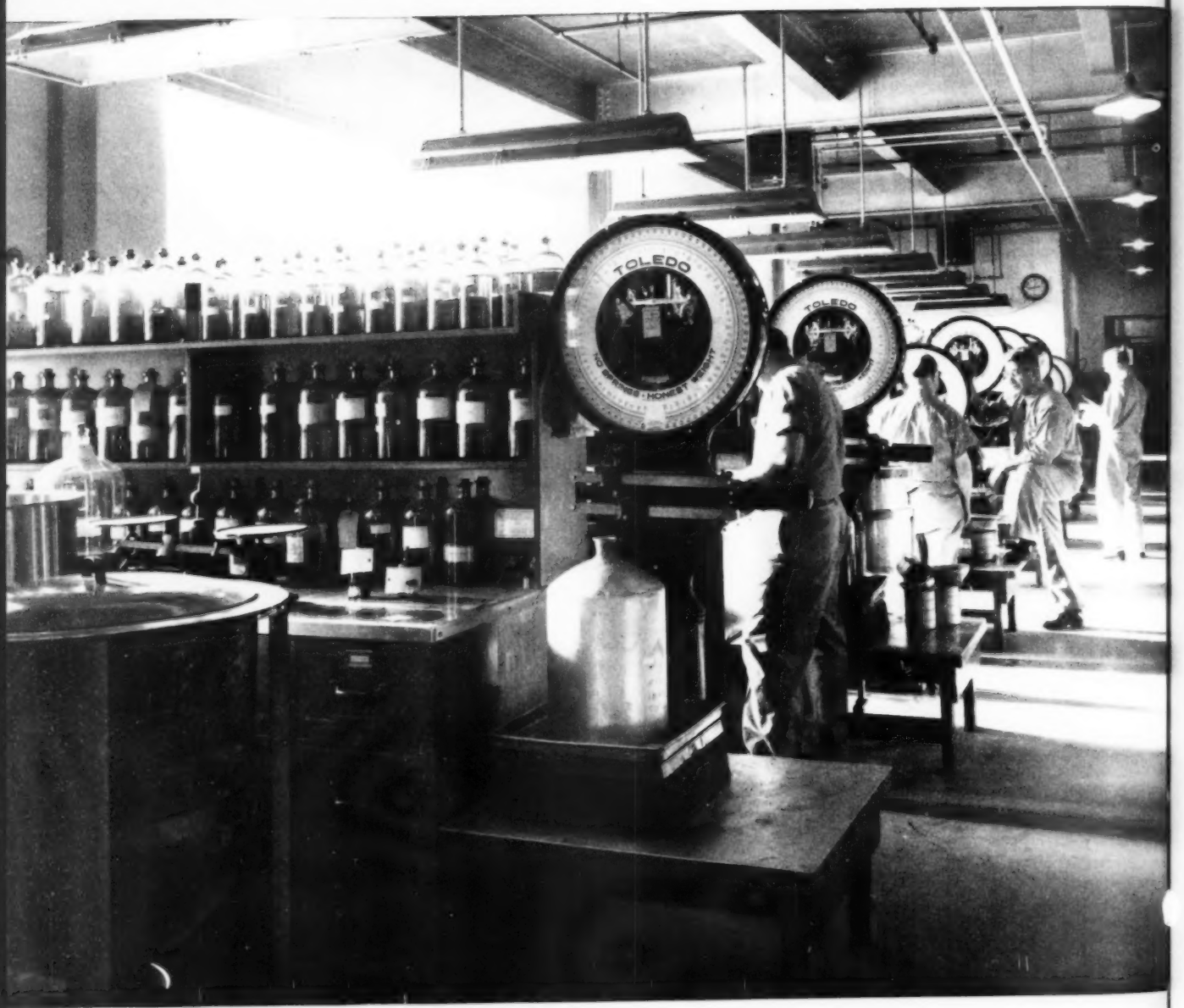
HERCULES **CELLULOSE GUM**

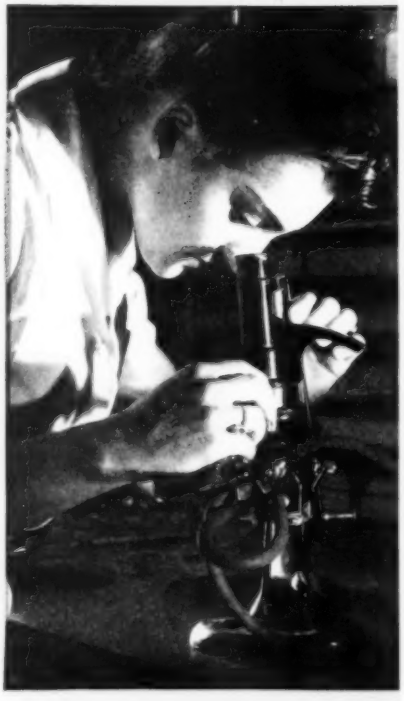
HERCULES POWDER COMPANY Cellulose Products Department, 970 Market Street, Wilmington 99, Delaware

CM52-13


TOLEDO
TOLEDO

because of Givaudan's

VERSATILE SERVICE...



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"Fragrance Is Your Business...And Ours"

Givaudan-Delawanna Inc.

330 West 42nd Street, New York 36, N. Y.

Branches: Philadelphia • Boston • Cincinnati • Chicago • Seattle • Los Angeles • Toronto

available at the same price as standard products

With its outstanding solubility characteristics, Riboflavin R.S., U.S.P., in three short years, has found wide acceptance for elixirs, injectable solutions, multivitamin drops, and many other uses.

Its high initial solubility and rate of solution—12 times as soluble as regular riboflavin in water at 25°C—makes possible preparation of many liquid formulations *without heating*. Such results eliminate the danger of injuring heat-sensitive compounds, greatly reduce your production costs.

Riboflavin R.S. is a pure crystalline form of riboflavin. It contains no foreign odors. Its biological availability is the same as lower solubility forms, yet Riboflavin R.S. costs no more than standard-solubility products. Send today for a sample and new technical data sheet.

Write Industrial Chemicals Division, Commercial Solvents Corporation, 260 Madison Ave., New York 16, N. Y.

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For the manufacturer of capsules and dry preparations, specify Riboflavin U. S. P. (standard solubility). Both R. S. and Standard forms available in 100, 1000 or 5000-gram containers.

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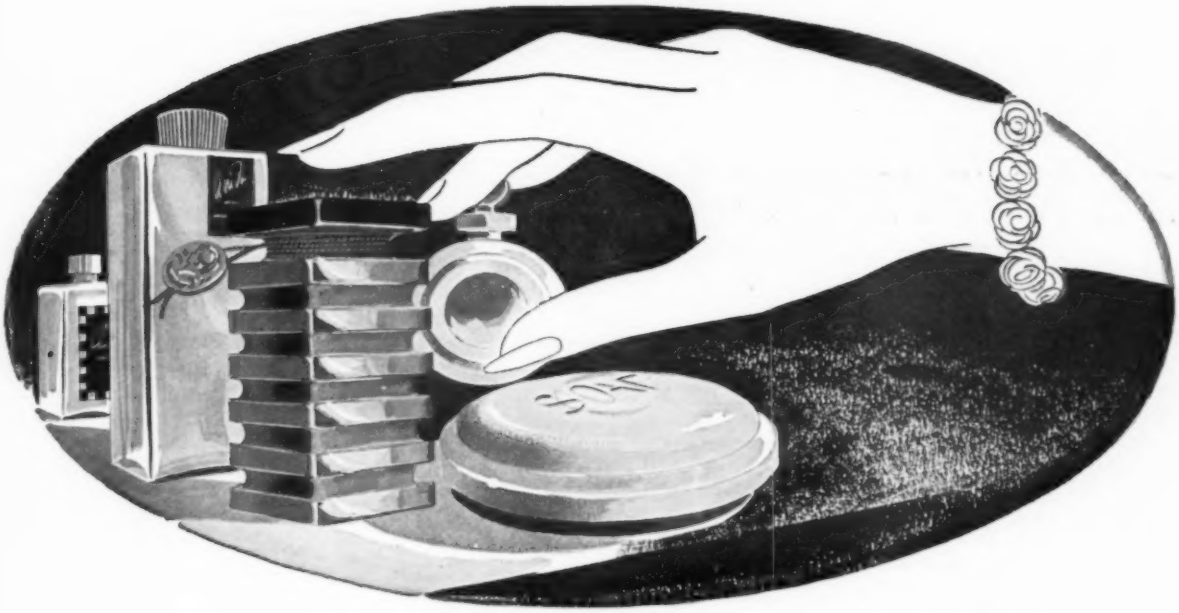

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YOU, TOO! VERONA bases will enable *your* products to *retain* their freshness of fragrance from manufacture to ultimate consumer.

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SYNTHETIC FRAGRANCES

to challenge the genius of nature!

PATCHOULY

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Unsurpassed for quality and uniformity . . . D&O Replacements faithfully reproduce the fragrance and characteristics of the natural product — at a far lower cost. Trial quantities, detailed information on request.

Oil Bergamot Synthetic
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Orris Concrete Synthetic

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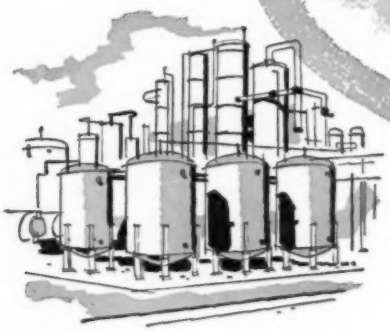

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These water-white, non-volatile liquids are *truly* versatile chemicals. They are humectants, solvents, and lubricants and yet are completely soluble in water. These products are heat-stable, inert to many chemical agents, and do not hydrolyze or deteriorate on standing. They are powerful solvents for dyes, drugs, resins, proteins, and other difficultly soluble materials, and leave no residual odor in end products. The polyethylene glycols are much less volatile than glycerol and are 40 to 70 per cent as hygroscopic. Within that range you can get any humectancy you need. In addition, the two hydroxyl groups can be esterified with organic acids. The diesters of fatty acids form plasticizers with good low-temperature properties and the monoesters form excellent surface-active agents that are not affected by mild acids or hard water.

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30 East 42nd Street UCC New York 17, N. Y.

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The term "Carbowax" is a registered trade-mark of Union Carbide and Carbon Corporation.

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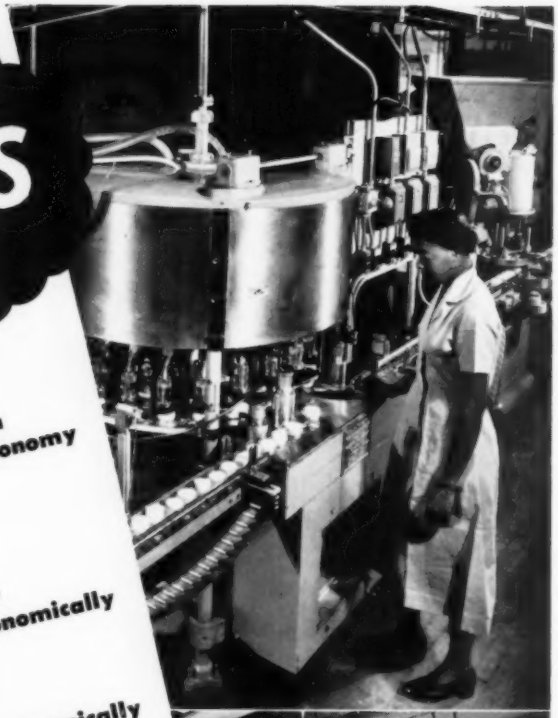

MANUFACTURED..

With uniform high quality
With complete sanitation
With cost-saving economy

PACKAGED..

Most attractively
Most dependably
Most economically

WAREHOUSED..

Safely • Conveniently • Economically

by KOLAR as well as by your own plant

Reasons: KOLAR'S volume buying . . . chemical laboratory testing . . . latest automatic and semi-automatic machines and conveyors . . . carefully trained personnel . . . rigid quality control . . . new larger building . . . over 42 years' specialized cosmetic experience . . . all applied to products of many cosmetic manufacturers and distributors so as to maintain the highest standards of efficiency at lowest per unit costs.

and certainly can be BETTER SUPPLIED and DISTRIBUTED

Reason: KOLAR'S location in the heart of the rich midwest market . . . at the center of the nation's railroad, trucking, waterway and airplane transportation systems . . . assuring on-time scheduled deliveries from raw material and container suppliers at lowest freight rates . . . fastest rush deliveries to your customers to meet emergencies.

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Even if you are now operating your own plant, get the facts and figures on KOLAR'S taking over your manufacturing, packaging, warehousing and distribution for areas remote from your base. Your inquiry, as well as any future KOLAR participation in your operations, will be treated in strictest confidence and your interests will be fully safeguarded. Address President George G. Kolar.

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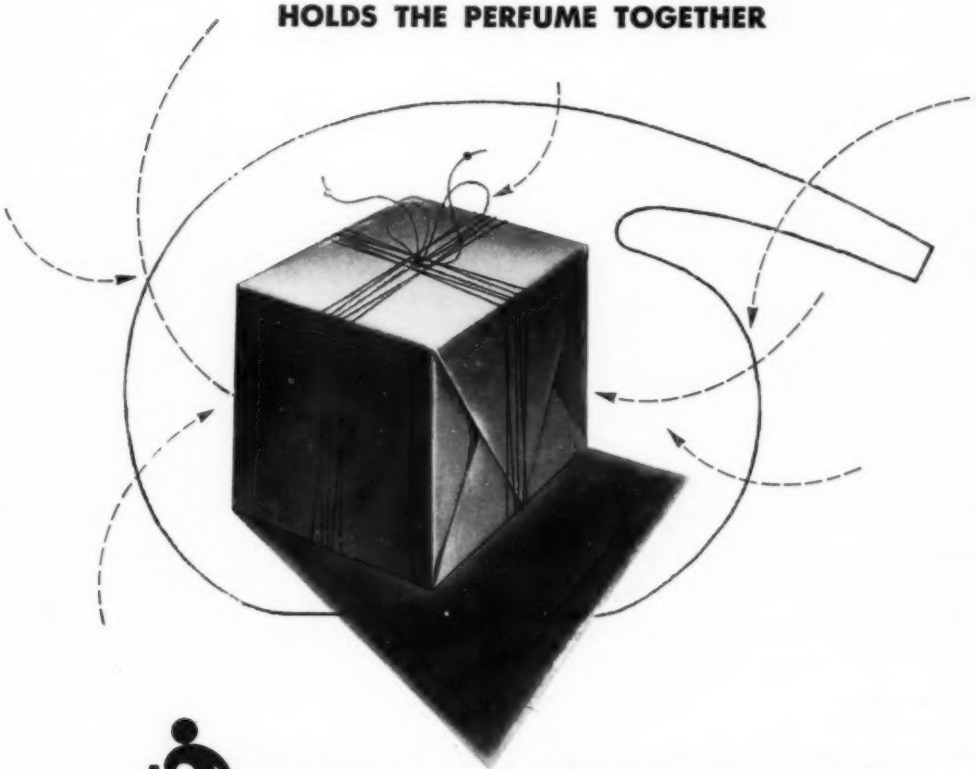
THE
new
aromatic chemical
musk-tonkin type
lasting, economical – $10.00 lb.

Useful addition to present standard fixatives

Does not discolor perfumes, creams, soaps, and other cosmetic preparations

Like a string around a package, it...

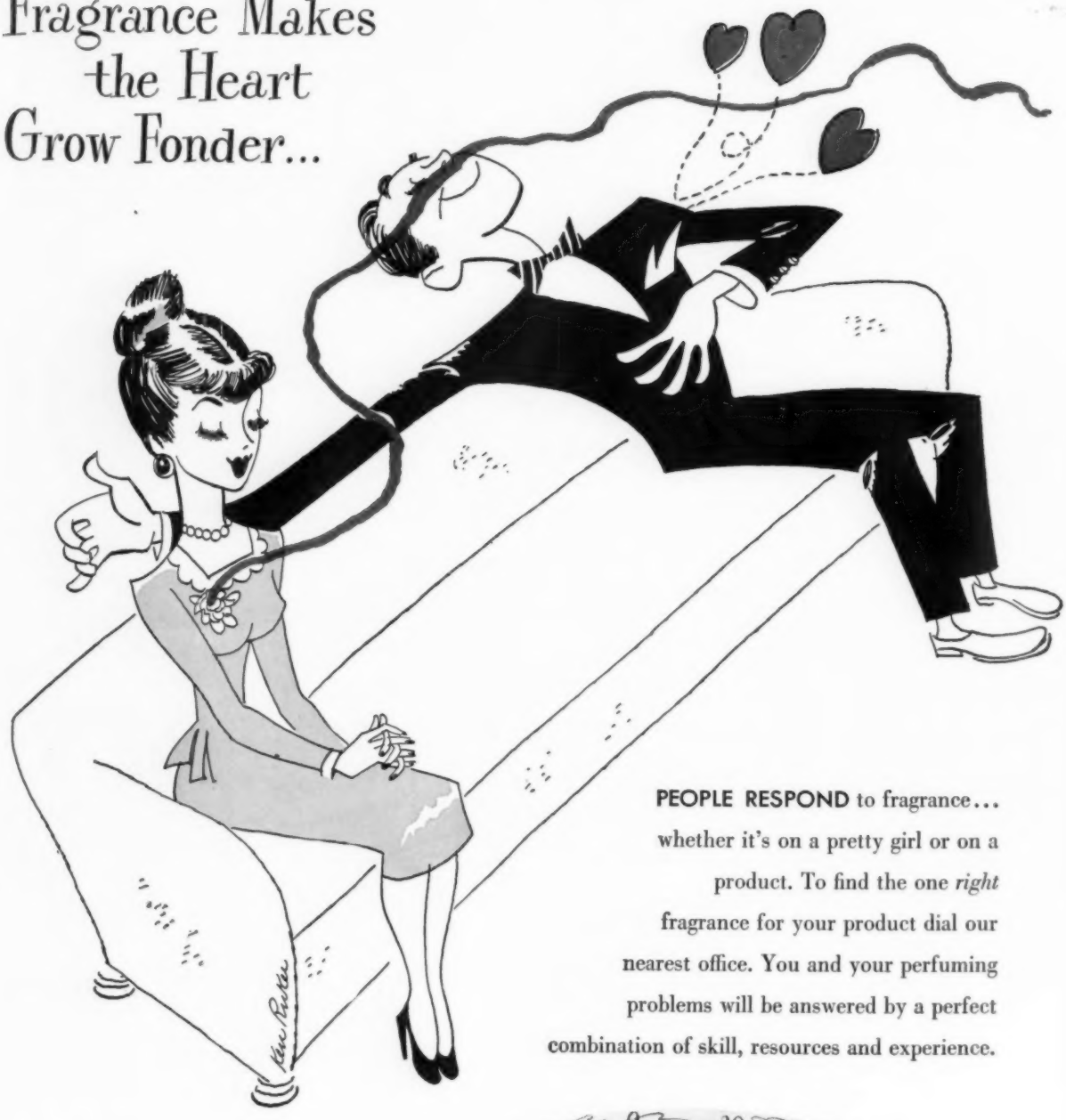
HOLDS THE PERFUME TOGETHER



Polak's Frutal Works, Inc., Middletown, New York

*Domestic and Foreign Patents applied for.

Fragrance Makes the Heart Grow Fonder...



PEOPLE RESPOND to fragrance... whether it's on a pretty girl or on a product. To find the one *right* fragrance for your product dial our nearest office. You and your perfuming problems will be answered by a perfect combination of skill, resources and experience.

NAUGAROMES—For various industrial and commercial uses.

SOAPOLS—For bar, paste and liquid soaps.

SHAMPAROMES—For liquid, cream and paste shampoos.

MODERN BASES—For fine perfumes, colognes, toilet waters, toilet preparations, etc.

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The critical point in a product's career is the planning stage.
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Plan, yourself, to make a beeline for the Full Line Fine Chemical House.
You'll find it's a good rule to follow . . .
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General Offices

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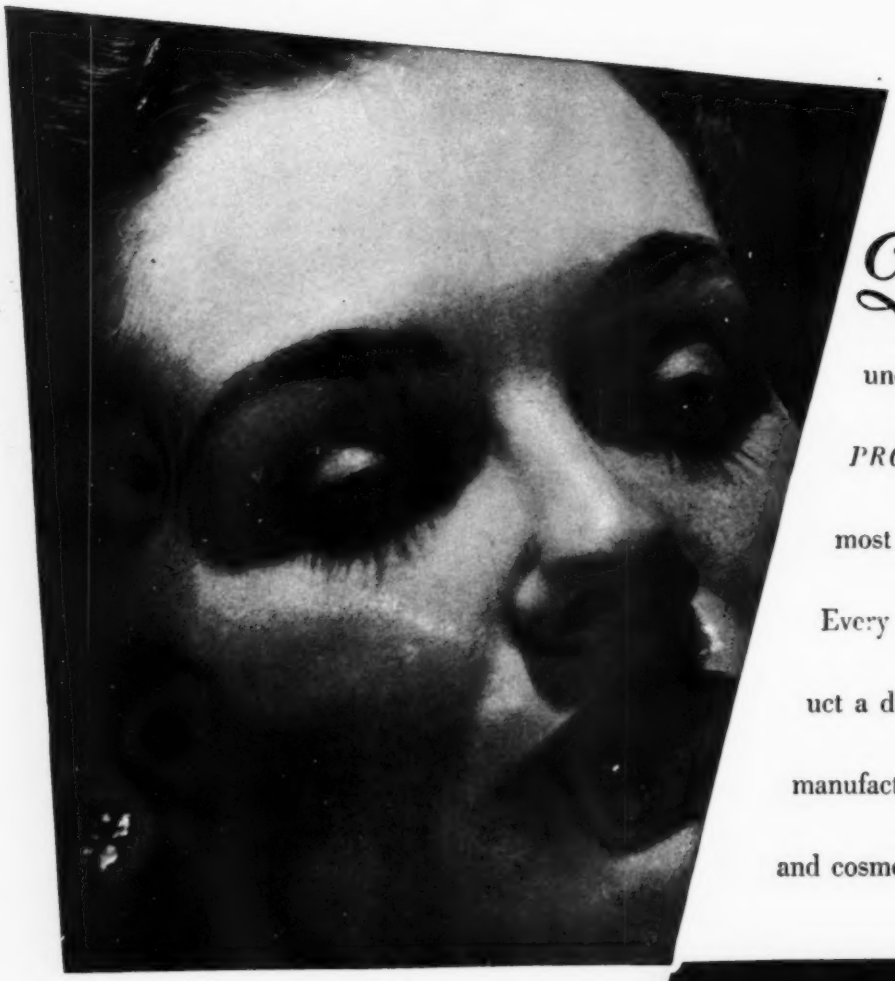

QUALITY based on unceasing research . . . *PRODUCTION* under the most exacting control . . . Every *SYNTOMATIC* Product a distinctive asset in the manufacture of your perfumes and cosmetic preparations.

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Colors with superior solubility, incomparable brilliance, dependable uniformity — no wonder they have been industry's standard for 101 years! We produce every color in the spectrum — just the color to enhance your product with exciting eye and buy appeal.

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FELTON ESSENTIAL OILS...
"THERE ARE NO FINER"
PIONEER
BRAND®
Birch, Sweet, U.S.P.
Cedarleaf U.S.P.
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Cedarwood
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Dill Seed
Dillweed
Hemlock (Spruce)
Hops
Peppermint Natural
Peppermint Rectified (Redistilled) U.S.P.
Peppermint Twice Rectified (Triple Distilled) U.S.P.
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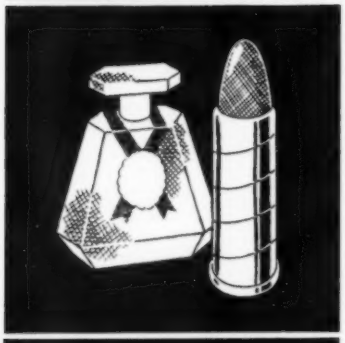

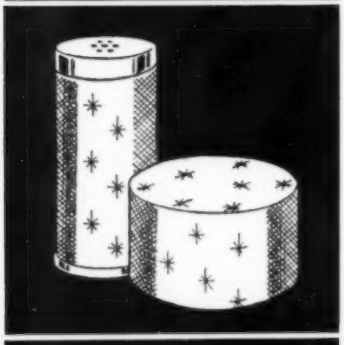

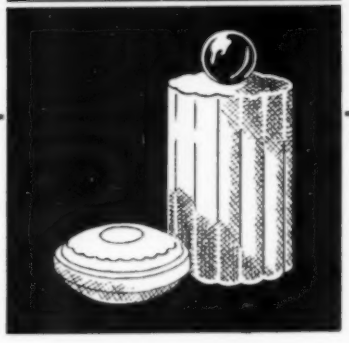

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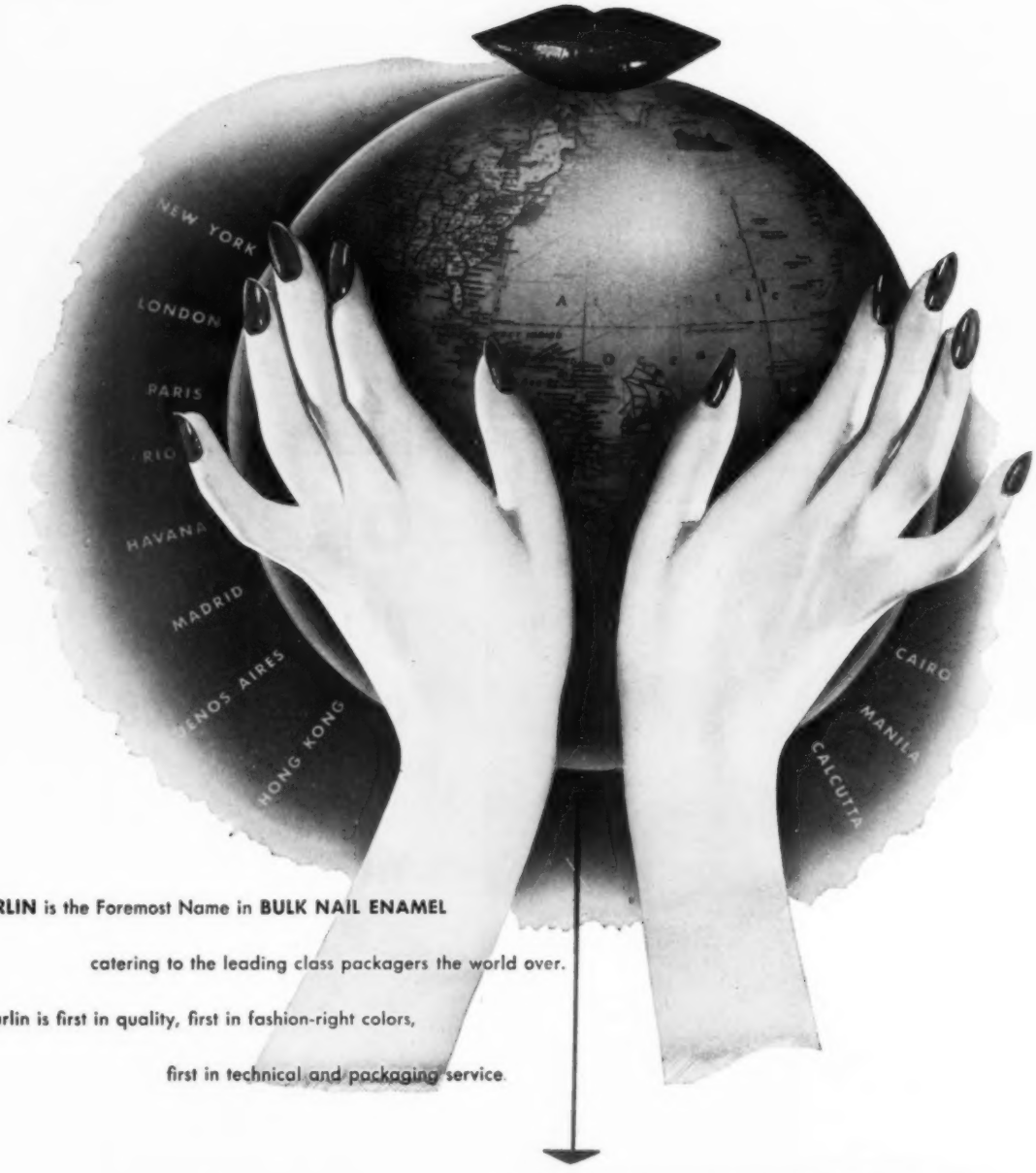

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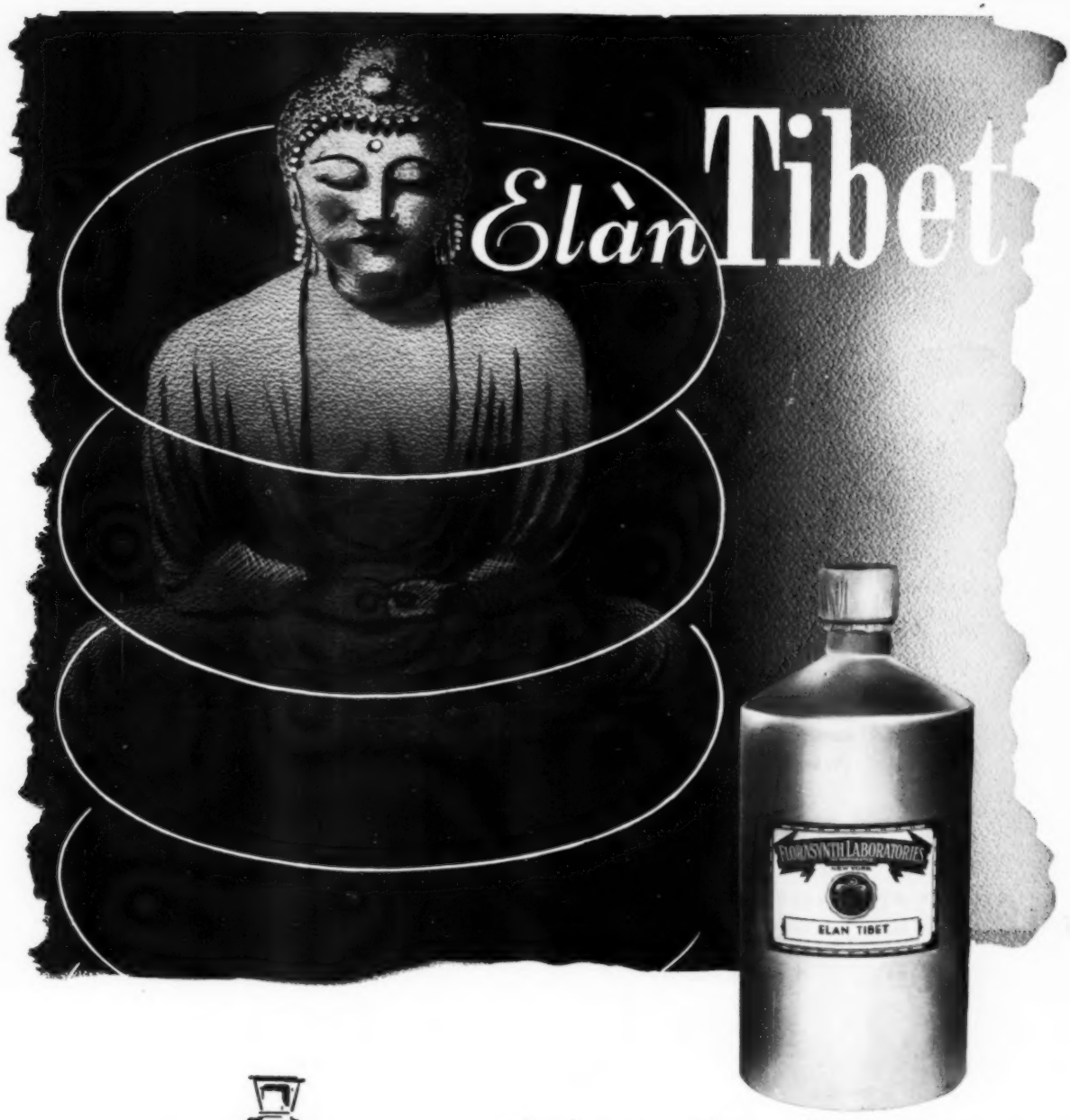

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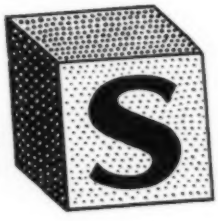

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Mallinckrodt phenobarbital is supplied in 100 lb. leverpak drums, 25 lb. fiber drums and in subdivision packages.

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Keeping Posted

Penicillin Tooth Powder

Penicillin tooth powder has been in use now for some time as a prescription dentifrice. In the May issue of Antibiotics and Chemotherapy, Henry Welch, W. A. Randall, L. E. Putman, and F. D. Hendricks, of the Food and Drug Administration, published an article entitled The Effect of Prolonged Use of Penicillin Tooth Powder on the Penicillin Resistance of Oral Microorganisms. An abstract of this article appeared in our August issue.

Dr. Philip D. Adams, director of research for The Andrew Jergens Company, introducers of the product, disagrees with the conclusions arrived at by the FDA scientists and writes us as follows:

"The August 1952 (page 225) DRUG AND COSMETIC INDUSTRY reviews correctly an article by Welch, Randall, Putman and Hendricks on the 'Effect of Prolonged Use of Penicillin Tooth Powder—' (Antibiotics and Chemotherapy II: 249-54 (1952)). This article does not mention certain points which I believe are essential to its correct evaluation.

"The conclusion of the article is that the *numbers* of penicillin-resistant organisms increased in the penicillin dentifrice users, but the actual data show that the *levels* of resistance were essentially the same in both groups. This point is mentioned in the article (page 253) but it would be missed by many people who have time to read only the conclusion. I do not know what the effect on the above would be, if any, of the fact that the saline suspensions of the mouth swabbings were transplanted by plane to Washington, D.C. where the bacteriological work was completed.

"Some weeks before the Walpole study was begun complete health records of all the children were compiled and were continued throughout and after the caries study was completed. Forty of the children on the penicillin dentifrice during the course of the study received penicillin for such infections as pneumonia, middle ear infections, tonsillitis, etc. In all instances the physicians reported to the hygienist that the children made the recovery that would be expected of the mode and dosage of penicillin administered. The penicillin dentifrice has been used on prescription by hundreds of thousands of people over a two year period and for five years by the Walpole children. Not a single instance has been shown of the penicillin dentifrice causing a penicillin resistant infection."

A.M.A. Drops Campaign

The American Medical Association disbanded its "eminently successful" campaign against compulsory health insurance last month and leaders of the movement formed a committee to support Gen. Dwight D. Eisenhower for president. The AMA said the drive against government health insurance had served its purpose. Dr. Louis H. Bauer, AMA president, announced that Dr. Elmer L. Henderson, chairman of the AMA coordinating committee, and Clem Whitaker and Leone Baxter, directors of the AMA national education campaign, resigned to participate in the presidential campaign.

Dr. Henderson, past president of the AMA, announced formation of a National Professional Committee for Eisenhower and Nixon, which will seek support for the Republican ticket among doctors, dentists, lawyers, engineers, accountants, pharmacists and other professional people. He was joined by two other past presidents of the AMA, Dr. Ernest E. Irons of Chicago and Dr. John W. Cline of San Francisco, as vice-presidents of the Eisenhower-Nixon organization. Mr. Whitaker and Miss Baxter will serve as campaign directors of the new committee.

Vice chairmen representing other professions on the committee include Harold J. Gallagher of New York, past president of the American Bar Association; Dr. Clyde E. Minges of Rocky Mount, N. C., past president of the American Dental Association; Robert Lincoln McNeil, Philadelphia, past president of the American Pharmaceutical Manufacturers Association and of the American Drug Manufacturers Association; Sidney L. Stolte, St. Paul, past president of the National Society

of Professional Engineers, and John F. Forbes, San Francisco, past president of the American Institute of Accountants.

It appears to us that the AMA, as usual, is making decisions based on its own limited knowledge and thus again placing itself in a most vulnerable position. There is no reason to believe that the cause of government health insurance has been overcome. It is true that progress has been made, but this does not mean that the forces behind such a program are to cease their efforts to have this type of program enacted. Only by a continuing program designed to educate the public concerning the evils of such a plan can other crises be prevented. It is certain that the drug manufacturers and others supporting the Health Information Institute are not going to quit merely because things look better. The directors of this organization know the problem and are willing to spend their money through the years to do their best to bring about conditions of excellent medical care available to all at reasonable cost without having the government take over the entire program. Then again, just because General Eisenhower has spoken out forcefully against the federal health insurance program and is described as having a "fighting chance" of becoming president, why do these representatives of organized medicine dare to throw all their eggs in one basket on such slim odds?

F.T.C. Injunction Against Vitamins

Once again the Federal Trade Commission is using its injunction power to stop advertising claims to which the Commission objects until the case is decided. The move for an injunction was brought last month against the National Health Aids Co. of Baltimore, manufacturers of vitamin preparations. The injunction plea and supporting affidavits signed by doctors alleged that the company was advertising its vitamin preparation as a cure for various ailments—arthritis and rheumatism are mentioned—but that the vitamins advertised actually have no such curative effect.

The company contends that its advertising, which is confined to radio and television, makes no curative claims at all, that the vitamins are advertised only as dietary additives, or nutritional supplements, and that the vitamins differ not at all from other reputable, standard vitamin preparations available without prescription at any pharmacy.

While the FTC has had injunction powers ever since enactment of the Wheeler-Lea amendment in 1938, the first time they used this power was something over a year ago when they obtained an injunction against advertising of Imdrin which they contended was harmful. This is the first time that they have sought an injunction against a vitamin preparation which certainly is not harmful.

Sun Tan Cream Stipulation

Cooltan, Inc., New York, has stipulated with the Federal Trade Commission to discontinue certain advertising claims for Cooltan, a sun tan cream. No longer will it be claimed that Cooltan is a unique or new kind of sun tan cream, that it allows a tanning action faster than that of other products used for the same purpose, or has any effect on the length of time a tan lasts. Also stopped are representations that Cooltan prevents freckles while permitting one to acquire a deep tan, or that it can be relied upon to permit a deep tanning within an exposure period of two hours or any other period not in accordance with the facts. And no longer will it be claimed that the product enables persons who otherwise do not tan to acquire a tan.

Broadened Fair Trade Bureau

Twenty-two national retail and wholesale trade associations in fair trade fields have joined the new Advisory Council established by the Bureau of Education on Fair Trade. Fields now represented on the Advisory Council of the Bureau include audio-visual products, automotive parts, books, dry goods, electronic products, groceries, jewelry, men's clothing, photographic equipment, hardware, radios and electric appliances, stationary and office equipment, tires, tobacco products, and wallpaper.

The Advisory Council is being developed to broaden the base of the Bureau in its expanding program of increasing public education and support of fair trade. A continuous interchange of ideas and information will be carried on among members of the Advisory Council so that all fair trade industries may join fully in the program to get the facts on fair trade to the public.

Current members of the Advisory Council represent these organizations which have long cooperated with the Bureau:

American Booksellers Association, American National Retail Jewelers Association, Conference of American Small Business Organizations, Master Photo Dealers & Finishers Association, Motor & Equipment Wholesalers Association, National Appliance and Radio-TV Dealers Association, National Association of Independent Tire Dealers, National Association of Retail Clothers and Furnishers, National Association of Retail Grocers, National Association of Tobacco Distributors, National Association of Wholesalers, National Audio-Visual Association, National Electronic Distributors Association, National Federal of Independent Business, National Retail Grocers Secretaries Association, National Retail Hardware Association, National Standard Parts Association, National Stationery & Office Equipment Association, Retail Tobacco Dealers of America, U. S. Wholesale Grocers Association, Wallpaper Wholesalers Association, and Wholesale Dry Goods Institute.

Glidden Producing Crude Chlorophyll

Crude chlorophyll production has been started by the Glidden Company at its flaxseed extraction plant in Buena Park, Calif. Production is from alfalfa by a process developed by Dr. Percy L. Julian, director of research for Glidden's soya products division in Chicago. Glidden president, Dwight L. Joyce, in making the announcement, said:

"We have turned out first pilot quantities with excellent results." Mr. Joyce emphasized that Glidden is pro-

ducing only the basic chlorophyll from which the finished product is refined. He also said that Dr. Julian's process does not require any extensive modifications of the Buena Park facilities.

Monsanto Skin Antiseptic

Monsanto Chemical Company has announced commercial availability of an improved, non-irritating bacteriostat for deodorant soap and similar products. A. T. Loeffler, development director of the company's Organic Chemicals Division, says that the product, which is 2,2′-thiobis(4,6-dichlorophenol) will be sold under the trademarked name of Actamer. Mr. Loeffler says that the product is retained on the skin in the minute amount necessary to provide sustained effectiveness against the bacteria often responsible for body odors and for many skin disorders. Controlled handwashing tests using soap containing small percentages of Actamer showed a reduction of resident skin bacteria of more than 97.5 per cent, it is claimed. The product is said to be particularly effective in the presence of soap against gram-positive cocci, often the cause of boils, carbuncles, and similar minor infections.

T.G.A. Convention Invitations

The board of directors of the Toilet Goods Association recently voted to extend invitations, as in the past, to all known manufacturers of perfumes, cosmetics and other toilet preparations, to attend the annual meeting of the association which will be held at the Waldorf-Astoria Hotel, New York, May 12, 13, 14. It was the feeling of the board that the work of the Association, and especially the convention program, might be helpful to many companies who for various reasons were unable to join or unwilling to join the Association.

With respect to suppliers of raw materials of various kinds, packaging materials, etc., the board voted to limit attendance at the convention to those suppliers who are associate members of the T.G.A. These associate members have taken a very active part in the affairs of the Association and have supported it strongly, and it was felt that it was only fair to them to limit suppliers' attendance to those who have cooperated so faithfully in the past.

Lasdon Foundation Grants

The Lasdon Foundation, a philanthropic organization founded four years ago by the Lasdon brothers, William S., Milton S., Stanley S., and J. S., to support research in medicine and health, has made grants totaling $264,424 for 1952. The four Lasdon brothers are associated with Nepera Chemical Company. One of the largest grants was to the Rheumatic Fever Institute of Northwestern University for studies on the influence of dietary factors and enzyme metabolism on the development and treatment of rheumatic fever. Another large grant to the University College, School of Medicine of Dublin, Ireland, is for chemotherapeutic research in tuberculosis under the direction of Dr. Vincent C. Barry.

Of a total of 20 grants of the foundation, two are studying hypertension, six are studying tuberculosis, and the others are studying pulmonary disease; dietary supplements, metabolism and enzymes; proteins of multiple myeloma; iodine metabolism; bronchospasm; antibodies as related to sensitization; arthritis; nutrition; peripheral vascular disease; antigenic constituents of pollen extracts; chemotherapy of neurotropic virus disease; and anticoagulants.

Injectable Medicinals Triple

Use of injectable medicines by U. S. physicians has tripled in the last five years and the current annual sales volume of $200 million is expected to double in the next decade, according to Graham Erdwurm, president of George A. Breon. Mr. Erdwurm told the company's sales representatives the recent "miracle" drug discoveries, notably antibiotics, have contributed to the big increase since 1946 in administration of drugs by injection. The "Age of the Needle" has just begun, he said.

"Research scientists have found out that stomachs react in many different ways when we swallow a pill," he said. "Some stomachs may be upset; others may seem to ignore the pill; while still others may appear to work fast to digest the medicine. In other words, some patients may receive the benefit of the drug immediately, in others the action may be delayed, while a few get no benefit at all." Consequently doctors often choose to inject a drug as "the best way to achieve the quickest results. Furthermore, an injection permits the dose to be individualized to the exact amount most suitable for the patient and for the treatment which is prescribed. Because of these facts, a patient today stands a fifty-fifty chance of 'getting a shot' on his doctor's next call."

With regard to specific medicines, Mr. Erdwurm pointed out that insulin and penicillin are given in millions of injections each year, but they are only a small portion of the total number of drugs available for individual injection. Many physicians now favor the injection of vitamin products because they feel this route of administration secures better and quicker results for the patient.

New Drug for Epilepsy

Successful control of psychomotor and grand mal epilepsy with a new drug, Themisone is announced in a preliminary report by Dr. Fred W. Stamps of the Neuropsychiatric Institute, University of Illinois College of Medicine. The report was presented at a meeting of the American Society for Pharmacology and Experimental Therapy held in Madison, Wis., September 8-9-10. At the same time, extensive pharmacological studies were reported by Dr. C. C. Pfeiffer, Department of Pharmacology, University of Illinois College of Medicine. In 300 cases uncontrolled by other medication, Dr. Stamps found that a high percentage of grand mal, psychomotor, Jacksonian and petit mal variant seizures were prevented by Themisone. The drug is not effective against petit mal but in patients suffering from petit mal and grand mal. For example, the grand mal

was controlled without aggravating the petit mal.

In general, the drug had a beneficial influence on personality, and in a number of cases, depressed cases were restored to normal outlook and behavior. Dr. Stamps emphasized that the drug is still under clinical investigation and that its characteristics and side effects have not yet been adequately studied. Some of the patients developed transient leukopenia. Reporting on his pharmacological studies, Dr. Pfeiffer said that Themisone is much less toxic than other drugs commonly used in the treatment of epilepsy. As much as 15 grams per day has been administered to patients over prolonged periods of time without ill effect. Dr. Pfeiffer said that Themisone was remarkable for its broad anticonvulsant activity in the standard laboratory test procedures.

Themisone, an aromatic hydroxy-amide, is a member of an extensive series of anticonvulsants synthesized by Dr. Roger W. Stoughton and co-workers in the laboratories of the Mallinckrodt Chemical Works, St. Louis, and studied pharmacologically by Dr. Pfeiffer. Clinical studies on other promising members of the series are in progress.

Mallinckrodt's Dr. M. A. Thorpe says that experimental quantities of Themisone would be available to pharmaceutical manufacturers interested in investigating the drug. He points out that the drug cannot be made available to the medical profession generally until a larger number of clinical cases has been studied.

Prescription Survey Results

Examination of 5,480 prescriptions filled by retail drug stores in New Jersey from September 1, 1951 to March 31, 1952 was recently undertaken at Rutgers College of Pharmacy in cooperation with Abbott Laboratories.

It was found that 4,385 of the 5,840, or 75 per cent of the prescriptions were for one or more specialties, while the remaining 25 per cent were for official products. The specialties of ten companies were prescribed in 2,793 prescriptions, representing 62 per cent of the specialties prescribed. These ten companies, in alphabetical order are: Abbott, Ciba, Hoffmann-La Roche, Lederle, Lilly, Parke, Davis, Pfizer, Smith, Kline & French, Squibb, Upjohn. The number of prescriptions upon which a manufacturer's name appeared was 562 or about 10 per cent of the prescriptions examined.

Ingredients to the extent of 7,635 were ordered in the prescriptions examined. Specialties (ingredients counted collectively) accounted for 58.5 per cent of the total, while U.S.P. items, including aureomycin and non-trade name penicillins, accounted for 39.5 per cent, with N.F. preparations accounting for the remaining 2 per cent. Ingredients of compounded prescriptions were counted separately.

Compounding was required in 21 per cent, while the other 79 per cent called for items dispensed as manufactured. Water was counted as an ingredient because preparation of a solution requires additional expenditure of the pharmacist's time. Of the 1,226 prescriptions requiring compounding, 22.5 per cent called for one ingredient, 42 per cent for two ingredients, and 16 per cent for three ingredients.

Tablets accounted for 34.3 per cent of the prescriptions, capsules for 15.2 per cent, drops for 8.3 per cent, elixirs for 7.9 per cent, suspensions for 7.9 per cent, syrups for 7.6 per cent, miscellaneous liquids for 7.5 per cent, ointments for 5.1 per cent.

Anti-infectives, including the antibiotics, sulfa drugs, and others, accounted for 31.8 per cent, sedatives and hypnotics for 8.9 per cent, cough and cold preparations for 7.0 per cent, analgesics for 5.8 per cent, nutritional preparations for 5.7 per cent, antispasmodics for 5.4 per cent, antihistaminics for 5.1 per cent, inhalants for 4.5 per cent, C.N.S. stimulants for 2.9 per cent, hormones for 2.7 per cent, hematinics for 2.6 per cent, cardiovascular agents for 2.4 per cent, and antirhuematics for 1.5 per cent.

The Non-Employed Oldsters Problem

Dr. Theodore G. Klumpp, president of Winthrop-Stearns, warned against the "ostrich-like policy of scrapping workers 65 years of age or older, whether or not they are capable of additional years of fruitful production." Saying that we are creating a nation of "oldsters", he declared that there are approximately 12 million persons in the U. S. today 65 years or over, and that by 1980, it is anticipated that we will have almost twice that number.

"Apart from the human consideration of cutting off their means of livelihood and the civic problem caused by an additional public tax burden, the age shift in our population promises to become one of the most important factors in influencing the entire economic and political structure of the nation," Dr. Klumpp told the New Hampshire Pharmaceutical Association.

Baby Cosmetics Tax Based on Claims

The Treasury is getting a little fussy about the promotions of babies' cosmetics which are now free of the retail excise tax. Because of the fact that many of these cosmetics can be put to certain adult uses, the Treasury Department appears determined to take steps to prevent the promotion of these products for adult use. This is clearly indicated by the following Section 320.50 which has been added as an amendment to T.D. 5922: "Under the specific provisions of section 431 of the Revenue Act of 1951 the tax does not apply to the sale on and after November 1, 1951, of lotions, oils, powders, or other articles intended to be used or applied only in the care of babies. The determination of whether toilet articles are intended to be used or applied only in the care of babies will be made only by reference to the advertising with respect to, and the labeling contained on, the article. If an article is advertised and labeled as being for use in the care of babies and is not advertised or labeled as usable by persons other than babies the article is exempt from tax even though the particular purchaser buys it for adult use. On the other hand, an article which is represented by advertising or labeling as fit for adult use, in addition to use in the care of babies, will not be exempt from tax even though sold to a purchaser who intends to use the article in the care of babies."

This simply means that the class or classes of people to

whom the product is recommended for use in the advertising and labeling is the controlling factor in determination of whether or not a cosmetic comes under the exemption from tax given to cosmetics for babies. The use to which the product is actually put, or the intent of the purchaser as to what use the product is to put, have nothing to do with a determination of whether or not a product is taxable.

F.T.C. Cites Hair and Scalp Claims

Walker Manufacturing Co. is charged by the Federal Trade Commission with false and misleading advertising and representations of various preparations sold as treatments for the hair and scalp. The Commission cites as false representations that Madam C. J. Walker's Wonderful Hair and Scalp Preparation contains penetrating oils that make the scalp healthy and put an end to short, thin, brittle and falling hair when the scalp is massaged with that preparation; that their preparation known as Madam C. J. Walker's Double-Strength Scalp Ointment is a competent and effective treatment for itchy scalp, dandruff, dandruff flakes, and tetter; that massaging the temples with their preparation known as Madam C. J. Walker's Wonderful Temple Salve causes hair to grow thicker in the thinning temple areas.

The Commission says that none of the preparations are capable of contributing in any manner to the health of the scalp nor do any of them have any therapeutic value in relieving the condition of short, thin or brittle hair or preventing falling hair; that none of the preparations is a competent or effective treatment for dandruff or tetter; that these preparations will only temporarily relieve an itching scalp and only temporarily cause the disappearance of dandruff flakes; and that none of the products, by massage or otherwise, will cause hair to grow thicker where it is thin.

Hair Tonic and Dandruff

The attitude of the Federal Trade Commission toward claims for hair products, particularly with regard to dandruff, is revealed in a complaint brought by the Commission against Ar. Winarick, Inc., charging false and misleading advertising of Jeris Antiseptic Hair Tonic.

The complaint brands as false the manufacturer's claims that: the preparation removes the cause of dandruff, itchy scalp, and falling hair and cures these conditions; that it stimulates the scalp and awakens the blood flow, nourishes the hair roots, promotes healthy hair and scalp; removes dandruff flakes and that no other hair tonic provides the benefits of promoting healthy hair growth, preventing falling hair or through antiseptic action, removing dandruff flakes; that barbers by reason of their training are capable of diagnosing and treating diseased conditions of the hair and scalp and effectively use Jeris in the treatment of dandruff, falling hair and other scalp conditions.

The opinion of the medical staff of the Commission is expressed by the statements in the complaint that the therapeutic effect of Jeris in the treatment of dandruff is limited to dissolving the dandruff scales so that they may be removed; that it has not been scientifically accepted that germs cause dandruff and that the use of Jeris will not remove the cause of itchy scalp or falling hair or cure these conditions. Use of Jeris will not stimulate the scalp or increase the flow of blood to the area so massaged, says the Commission, which adds that neither the use of Jeris nor such massage will nourish the hair roots or promote healthy hair growth or a healthy scalp; that there is no connection between the antiseptic action of Jeris and its solvent action on dandruff flakes; that the preparation is not unique or materially different from nor has greater therapeutic effect than some preparations sold by respondent's competitor; that barbers are not trained as dermatologists and are not qualified for or capable of diagnosing or treating diseases of the hair or scalp.

Many Fair-Trade Contracts Advised

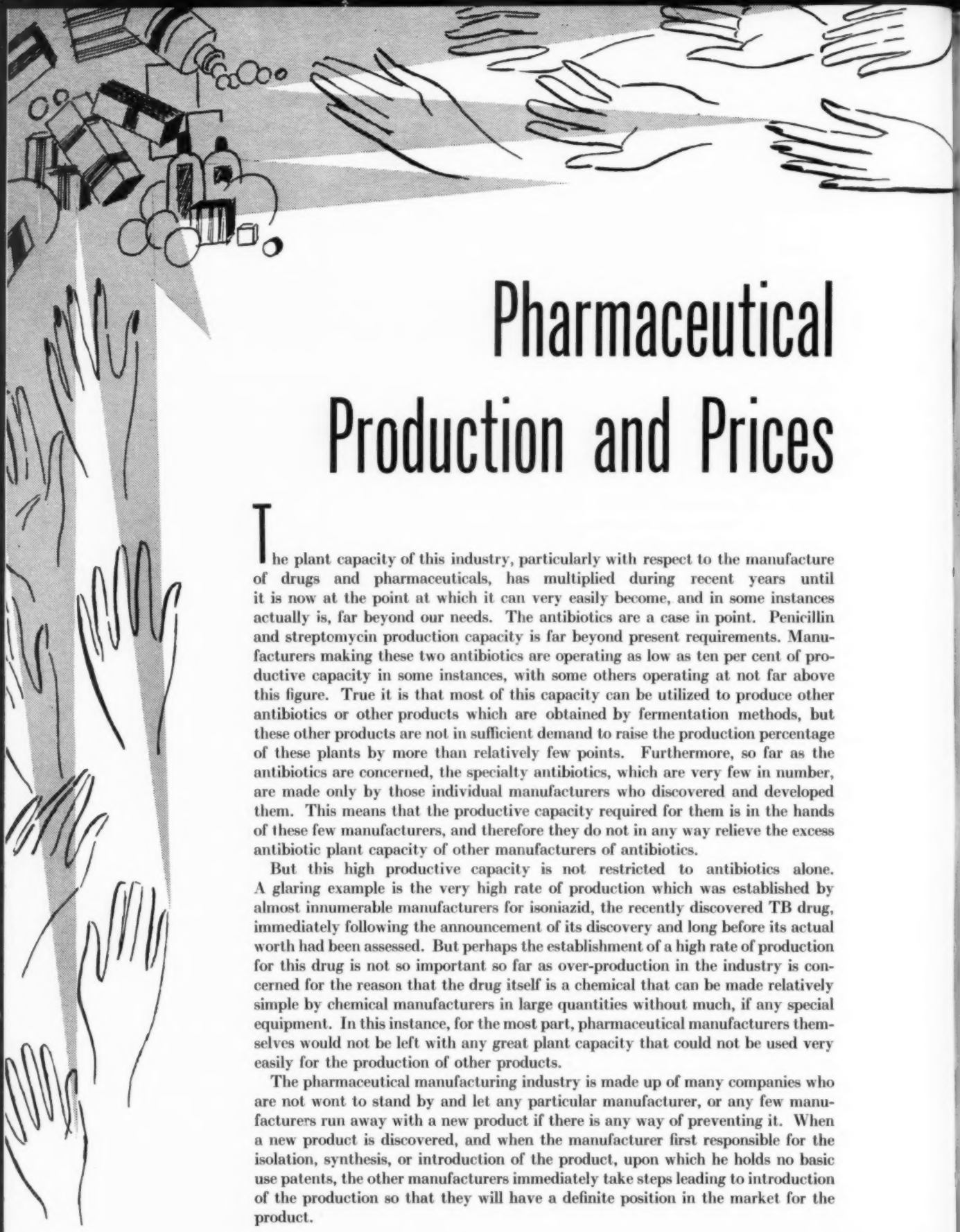
"There is growing recognition among fair-trading manufacturers of the wisdom of getting a substantial number of signed fair trade contracts from distributors in each fair trade state," says the Bureau of Education on Fair Trade. "A prime example is Sunbeam Corporation which set about signing up all its dealers during the past year as the only way to halt price-juggling. Even though the McGuire Act has restored the non-signer clause in interstate commerce, however, Sunbeam intends to keep on adding to the 160,000 signed fair trade contracts it now has.

"When a manufacturer's fair trade structure rests on a broad foundation of signed contracts throughout the country, the frequently made charge against the non-signer clause—to the effect that it can bind all retailers in one state on the basis of a single fair trade contract—just doesn't stand up."

New Antibiotics

Lederle Laboratories has announced isolation of "a rare antibiotic-producing mold from soil taken out of an old Indian mount in Wisconsin. The chalk-white mold (a species of Actinomyces-Streptomyces albo-niger) is capable of producing an antibiotic which is active against Trypanosoma, a parasite that causes African sleeping sickness." Dr. J. H. Williams, Lederle director of chemical and antibiotic research, says that Achromycin shows curative effects against this infection in laboratory animals and that clinical trials will be run in due course.

Thioaurin, a new antibiotic, and Cardicin, an antibiotic having antimicrobial and antiviral properties, were announced by scientists of Sharp & Dohme at the American Chemical Society meeting last month. Thioaurin is said to be active against gram-positive and gram-negative organisms but it is relatively inactive against molds and yeasts. Its structural formula is given as $C_{14}H_{12}O_4N_4S_4$. Cardicin is said to inhibit the growth of several gram-positive bacteria, molds and yeast and a large number of bacteriaphages are inhibited differently. It is active *in oro* against the PR-8, Lee, and FM-1 strains of the influenza virus. The acute toxicity of Cardicin in mice is sufficiently great that therapeutic usefulness is doubtful. Cardicin may be differentiated from Ehrlichin on the basis of its activity against bacteria and bacteriophages.



Pharmaceutical Production and Prices

The plant capacity of this industry, particularly with respect to the manufacture of drugs and pharmaceuticals, has multiplied during recent years until it is now at the point at which it can very easily become, and in some instances actually is, far beyond our needs. The antibiotics are a case in point. Penicillin and streptomycin production capacity is far beyond present requirements. Manufacturers making these two antibiotics are operating as low as ten per cent of productive capacity in some instances, with some others operating at not far above this figure. True it is that most of this capacity can be utilized to produce other antibiotics or other products which are obtained by fermentation methods, but these other products are not in sufficient demand to raise the production percentage of these plants by more than relatively few points. Furthermore, so far as the antibiotics are concerned, the specialty antibiotics, which are very few in number, are made only by those individual manufacturers who discovered and developed them. This means that the productive capacity required for them is in the hands of these few manufacturers, and therefore they do not in any way relieve the excess antibiotic plant capacity of other manufacturers of antibiotics.

But this high productive capacity is not restricted to antibiotics alone. A glaring example is the very high rate of production which was established by almost innumerable manufacturers for isoniazid, the recently discovered TB drug, immediately following the announcement of its discovery and long before its actual worth had been assessed. But perhaps the establishment of a high rate of production for this drug is not so important so far as over-production in the industry is concerned for the reason that the drug itself is a chemical that can be made relatively simple by chemical manufacturers in large quantities without much, if any special equipment. In this instance, for the most part, pharmaceutical manufacturers themselves would not be left with any great plant capacity that could not be used very easily for the production of other products.

The pharmaceutical manufacturing industry is made up of many companies who are not wont to stand by and let any particular manufacturer, or any few manufacturers run away with a new product if there is any way of preventing it. When a new product is discovered, and when the manufacturer first responsible for the isolation, synthesis, or introduction of the product, upon which he holds no basic use patents, the other manufacturers immediately take steps leading to introduction of the production so that they will have a definite position in the market for the product.

Cortisone is a case which well illustrates this type of thinking on the part of the pharmaceutical manufacturers. Not that this is not for the good of the industry and for the good of the medical profession and for the health of the people in general. It is a much better condition from these angles than if one manufacturer were able to control exclusively the production and marketing of a product which is of great importance in the maintenance of health. When the first manufacturer of cortisone in this country first synthesized the drug and studied its possibilities after very sparse clinical application with the small amount first synthesized, the officials of that company immediately arrived at the conclusion that the product was too big and too important for the one company to undertake alone the task of producing the drug and supplying it to all who would be likely to need it. This is not intended to mean that this opinion of this one company had any influence on other companies entering the market for this drug, but it merely is intended to show that the management of the leading pharmaceutical houses recognize their responsibilities to those who use and those who are treated with their products.

As soon as the importance of cortisone was recognized, many other pharmaceutical houses immediately went to work to try and lick the raw material shortage with which the original producer was faced. And the continued work by the original manufacturer and later entrants to lick the raw material shortage by increasing yields as well as by finding new methods of production from more plentiful raw materials quite soon brought startling results. Now the people of this nation and abroad are assured of a plentiful supply of this important drug, and they are now buying the drug at less than one-tenth its selling price when the drug was first placed on the market in limited quantities just under three years ago.

In situations such as these, however, there is always the probability of productive capacity for such a drug reaching a point at which it is far beyond requirements. Then sharp price competition enters the market, and the next thing is that the industry finds itself performing a great public service while receiving next to no profit or an actual loss for performing this service. Such a condition benefits no one. It certainly does not benefit the industry which lives and develops only because of profit; it benefits the medical profession and the public only for a short period of time for the reason that the development of other important drugs which may be discovered in the future will be retarded and will not reach sufficient productive capacity for a very long time. Furthermore, prices of these new drugs will be kept at high levels during the period of shortage due to the fact that manufacturers will realize that they must reap their profits while they are in a position to do so. Certainly manufacturers in this industry will become shy of rushing into extremely expensive research programs and vast building projects when they have seen similar activity on their parts result within comparatively few years in a losing proposition.

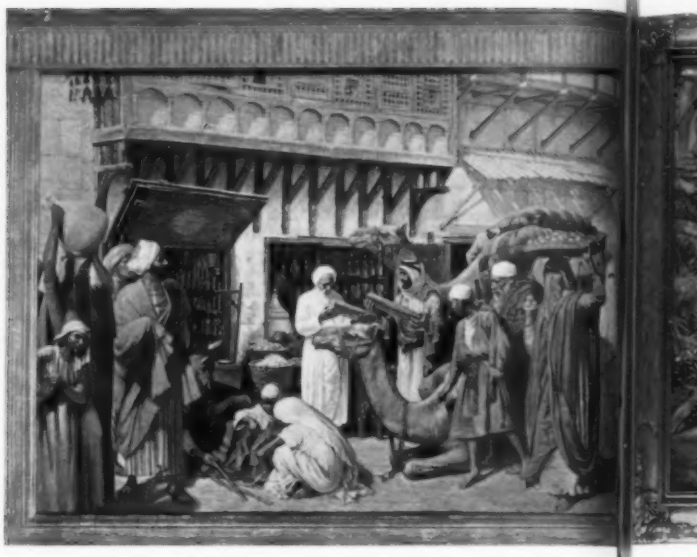
Naturally there is no way of controlling such a situation. Manufacturers are free to do as they please in the matter of what products they make and in what productive capacity they care to provide for any product. Unfortunately there are manufacturers in the pharmaceutical industry who are determined to establish or to maintain their positions in the markets for certain drug products even though the establishment or maintenance of these positions mean selling specific products at or below cost until such time as their competitors give up active promotion of these particular items. This competitive practice is not confined to the pharmaceutical industry as everyone knows, but it is a practice which would seem to be entirely foreign to the scientific business of development, production, and "ethical" marketing of prescription drugs. Somehow the two things do not seem to go together, and certainly selling below cost hardly seems to fit the expression, "ethically promoted."

(Continued on page 556)

Pharmacy In Pictures

Being painted at the rate of six a year by 37-year-old Detroit Artist Robert A. Thom, oil paintings commissioned by Parke, Davis & Company depicting the history of pharmacy had reached a total of 14 at the time of the recent American Pharmaceutical Association's centennial convention held in Philadelphia in August. These were exhibited on August 19 in the Red Room of the Bellevue-Stratford Hotel for viewing by those attending the convention. Framed prints of the six 1952 pictures were presented to the A.Ph.A. at the end of the showing. A similar set of six prints was presented to the association last year, so that the organization now possesses the first 12 prints in the continuing series which is to be completed in 1956.

The idea of the series of paintings originated with George A. Bender, editor of Modern Pharmacy, a Parke, Davis publication which circulates to pharmacists in the United States, Canada, Puerto Rico, Hawaii, the Philippines, and the Canal Zone. The pictures, which have been very popular among pharmacists, also have attracted much attention outside the profession. Physicians, nurses, educational institutions, libraries, hospitals, and many other have requested prints to the extent that nearly 15,000 sets of art prints of the first six pictures have been distributed. This is in addition to 85,000 sets which have appeared as inserts in Modern Pharmacy.



THE FIRST APOTHECARY SHOP—(ABOUT 754 A.D.)

The first privately-owned—but government supervised—drug stores were established in Bagdad about 854 A.D. by the Arabs. They added to Greco-Roman wisdom with their own syrups, confections, conserves, distilled waters and alcoholic liquids. When the Moslems swept across Africa, Spain and Southern France, they brought to Europe a new pattern of Pharmacy.

TERRA SIGILLATA—FIRST "TRADE-MARKED" DRUG

One of the first therapeutic agents to bear a special mark as a means of identification and to gain customers' confidence was Terra Sigillata (Sealed Earth). This clay tablet from a Mediterranean Island was formed into pastilles and impressed with an official seal by priestesses as early as 500 B.C.

PEDANIOS DIOSCORIDES—(FIRST CENTURY A.D.)

Pedanios Dioscorides contributed greatly to the transition of pharmacy from a trade to a profession. He accompanied Roman armies throughout the known world, recording his observations and laying down rules for collection, storage, and use of drugs. His texts were considered basic science as late as the sixteenth century.

GALEN—EXPERIMENTER IN COMPOUNDING (131-201 A.D.)

Principles of preparing and compounding medicines established by Galen ruled in the western world for 1,500 years. This foremost practitioner of both pharmacy and medicine originated a formula for a cold cream which is essentially similar to that known today. His name is still associated with galenicals—the class of pharmaceuticals compounded by mechanical means, and many of his procedures have their counterparts in today's laboratories.

DAMIAN AND COSMAS (ABOUT 300 A.D.)

Damian the apothecary and Cosmas the physician were twin brothers of Arabian descent who offered the solace of Christianity as well as their knowledge to the sick. For centuries, their tomb in the Syrian city of Cyrus was a religious shrine. They are the patron saints of pharmacy and medicine, and many miracles have been attributed to them.

MONASTIC PHARMACY—(5TH TO 12TH CENTURIES)

Remnants of western knowledge of pharmacy and medicine were preserved during the Middle Ages in monasteries. Manuscript were copied for monastery libraries, and herbs and samples were either gathered in the field or raised in herb gardens. The monks prepared them according to the art of the apothecary for the sick and injured.

COURTESY HELENA RUBINSTEIN

Foundation Creams and Lotions

by Harry Hilfer

In the evolution of the various types of cosmetic preparations, the one class of preparations capable of greatest ramification has been the vanishing cream and hand lotion type of product. The generalized formulae representing these preparations were capable of incorporation of a greater variety of additional raw materials with little change in formulations than were most of the other products, so it therefore became the basic formulation which led to the development of the foundation cream and lotions which are so popular presently. The classic vanishing creams were designed first for the application of a thin film on the hands to first make the hands feel smoother, and second to exert a measure of protection against chapping. It was found that a good basic formula for such a preparation could be made by emulsifying an excess of stearic acid with a small percentage of a potassium stearate soap. Included in the formulation was a fair percentage of glycerol as a humectant and as an additional factor in promotion of the smoothening effects. Hand lotions of the past also consisted of soap emsulsifiers containing excess fatty acids and other lipoids and generally stabilized by additions of some of the natural gums. These also contained fair amounts of humectants.

These original preparations as such, when applied to the face, were capable of forming films which would cause face powder and other make-up preparations to adhere better than they otherwise would. In time, the formulations designed as foundation preparations were further qualified to cause the principal adherence function to exercise itself to a greater capacity. Also the concentration of humectant was gradually reduced and replaced with a higher percentage of lipoids and mineral oil. The advent of triethanolamine caused a change from the old potassium soap formulation to triethanolamine soap instead which made it better from an irritational standpoint since the triethanolamine soaps are less irritating, possibly because of a lower pH. This evolution occurred in both creams and lotions.

In lotions the evolution was further helped by the increase in the number of emulsifying agents which became available. Materials such as glyceryl monostearate and other esters of polyhydric alcohols came into greater and greater usage and have now found a fairly permanent place in cosmetic preparations as emulsion stabilizing agents. The advent also of the synthetic detergents such as the sulfated lauryl alcohols further broadened the scope of the formulator. One of

the principal shifts has been from the use of materials thought of as natural in their origin to a preponderance of synthetic agencies. Judicious use of both types is the most convenient and efficient method.

In time, attempts were made to introduce pigments into these systems so that a preparation could be made to combine both the functions of the foundation cream and face powder. None of these were markedly success ful until the appearance of the cake make-up, which contained in addition to the pigments and opacifying powders a dehydrated foundation cream, incorporated with the powder, dispersed thoroughly, ground and pressed into tablets. Application was made with a moist applicator which on gentle trituration caused the aqueous phase to be incorporated into the emulsion. The emulsion film containing the powders and pigments could then be applied to the face in a more uniform film than was otherwise possible. The success of this preparation started a revolution in the habits of women using make-up and accelerated investigational activity into other products which were to have similar functions. As a result methods of incorporation of pigments and powders into similar vehicles were studied. Among the first to appear were oil and wax mixtures with pigments ground into the mass in much the same manner as in cream rouges. Most of these, however, had too great a ratio of oil to pigment and the resultant film was therefore too greasy insofar as popular consumer acceptance was concerned. Investigation of the use of the monohydric lower alcohol esters of stearic and myristic acids, suggested a method of overcoming this difficulty because of the extremely low viscosities of these esters. Products formulated along these lines began to appear on the market and enjoyed greater success, since the lower viscosity oils permitted larger quantities of powders to be incorporated and since their application resulted in a thin enough film so that there would be no hint of "greasiness."

COURTESY ELIZABETH ARDEN

One of the problems inherent in preparations of this type was to overcome a tendency towards stiffening at the elevated temperatures at which the preparation was poured into containers. This stiffening was caused in part by the physical presence of large quantities of pigments but even more so by air incorporation. Addition of surface tension reducing agents such as lanolin and others effectively overcame this tendency. It was therefore possible by the judicious use of carnauba wax and other waxes to endow the product with any desired thixotropic effects.

Paralleling this development was the attempt to incorporate the powders and pigments into an aqueous cream base—substantially a vanishing cream type containing relatively large amounts of glyceryl monostearate. Unfortunately, this type of product had of necessity to be packaged in a wide-mouthed jar, and under the circumstances relatively large amounts of moisture were lost through evaporation because of the large area exposed. This resulted in undesirable discoloration in the jar which increased sales resistance.

At the same time work was being done to incorporate the pigments into a liquid medium. The first of these to enjoy any measure of success was a suspension of the pigments and powders in isopropyl myristate. This pigment however had a bad habit of settling on standing and many consumers felt that the film was too oily. Obviously the best method to overcome this objection was to incorporate the pigments in an emulsion medium. At the present time these types of make-up lotions or formulation lotions are enjoying great popularity.

In examining these products we find that a combination of recent developments are responsible for their successful formulation. They consist of a large concentration of powders principally titanium oxide and pigments which are successfully held in suspension in an emulsion which contains an amount of lipoid not in too great excess over the pigments concentration. The resultant film will therefore not have as great a tendency towards greasiness after evaporation of the aqueous phase. Their formulation are not easy since a number of functions must be balanced against each other. In general these functions consist of emulsifiers, an oil system, suspending agents to keep the pigments in suspension, and the pigments themselves all emulsified in the external aqueous phase. However, when the film has dried after application there must be enough of an oil film present to prevent rewetting or reemulsification of the pigments by perspiration or other water which could accidentally reach the face. However, there are now available a large number of substances only recently reaching the market whose proper choice

(Continued on page 557)

COURTESY RILLING-DERMETICS CO.

Cosmetics and Drug Stores

Some Excerpts From the Association Chain Drug Stores Meeting

"A bull market in grooming products for men is leaping to new highs daily," Louis F. Bonham, president of Seaforth, told the Associated Chain Drug Stores at their annual meeting held in New York last month. "From almost a standing start fourteen years ago, yearly volume has increased steadily and is estimated to be $265,760,000. At one time there were some three hundred brands of men's toiletry lines, which has now leveled down to approximately six important fast-selling lines." As to the reasons for this "big new market", Mr. Bonham says: "men bathe more often, shave more often, and spray themselves daily with a variety of pleasant-smelling lotions, colognes, and deodorants. Close personal contact and education have made this a part of American living. Men's toiletries today are to the barber shop like the daily shower is to yesteryear's Saturday night tub."

"The growth of men's toiletries has come so fast that many retailers have not yet caught up with the tremendous sales and profit possibilities offered," continued Mr. Bonham. "Other types of outlets have been playing this field strongly, and the druggist is just really getting under way."

"Hair care today is big business in the United States, bigger than it ever was and still growing," John J. Steeves, chain store manager of Pepsodent Division, Lever Brothers, told the chain stores. "A recent survey showed that five years ago Americans spent 262 million dollars a year on shampoos, rinses, tonics, brushes, combs, bobby pins, curlers, hair nets, and home permanents. Last year, we bought over 360 million dollars worth of the same items. . . .

"Drug stores don't get all this 350 million dollar business. Actually in 1951 you got 41 per cent of it—or 145 million dollars worth. In 1947 you were doing slightly better percentage wise—you received over 43 per cent of the business. However, the 145 million dollars of business druggists did in 1951 was large enough to be: over 50 per cent greater than the dollar business drug stores did in cosmetics, about 50 per cent greater than the dollar volume of feminine need items, almost one and a half as large as dollar volume in oral hygiene products, almost double the business done in baby care items.

"Looking at the various items included under hair care products, the survey referred to above shows that since 1949, a relatively newcomer to the hair care field—home permanent kits and refills—has been the number one item in the group in terms of dollar sales. In 1947

the total home permanent market was about 28 million dollars, of which almost 20 million was sold through drug stores. By 1951, American women were spending a little over 55 million dollars for home permanents, with drug stores gaining 35 million of this volume.

"Looking at it another way, since 1947, drug store sales of hair care items have gone up 20 per cent in dollar volume. During the same time, your volume on home permanents has increased by 78 per cent—almost four times as quickly. That means that by last year this one item was doing almost one quarter the dollar volume of what has been proven to be one of your most important departments."

Looking at the future of home permanents, Mr. Steeves said that Lever's Market Research Division had arrived at the following assumptions which they feel are useful in predicting the home permanent business for the next few years:

Home permanent sales will continue to keep pace with the population growth.

In addition, we can add one per cent growth per year because many older women, who today are not home permanent users, will be replaced by women accustomed to use home permanents.

Prices will be unchanged on individual brands.

There will be no economic fluctuation serious enough to have a major effect on home permanent sales.

There will be no new technological developments in home permanents of a nature to cause additional market expansion.

As a result of these predictions, it is estimated that by 1957 home permanent sales at retail will total 65 million dollars, or an increase of about 18 per cent over 1951's volume.

"Back in 1947, drug stores did 70 per cent of the home permanent business," continued Mr. Steeves. "By 1949 this figure had crept up to 72 per cent of the home permanent business, but since then drug stores have slipped considerably so that in 1951 you did only 63 per cent of the business. Had drug stores maintained their 1947 proportion of all home permanent sales, their sales in 1951 would have been 39 million dollars rather than 35 million. As you probably know the biggest inroads on this business have been made by food stores which now account for 16 per cent of home permanent volume."

"Manufacturers of shampoo, hair preparations, and accessories bought during 1931, in national magazines, $291,000 worth of space," said John H. Breck, vice-president and general manager of John H. Breck, Inc., in discussing advertising. "Twenty years later, in 1951, shampoo, hair preparation, and accessory manufacturers invested $11,200,000 in this same medium. The total investment in magazine ads alone for the year 1951 would be over $24,000,000, and obviously all other media such as radio, television, newspapers, etc., no doubt had the same percentage increase. . . .

"A statistician's 'look-see' at our 1952 economy clearly indicates that more women are at work in 1952 in America than at any time in our past social history. One magazine claims that 19 million women are working, and if that claim is questionable, then statistically, by the Bureau of Census in 1920, nine per cent of all married women were employed; by 1952 this figure added to 24.8 per cent.

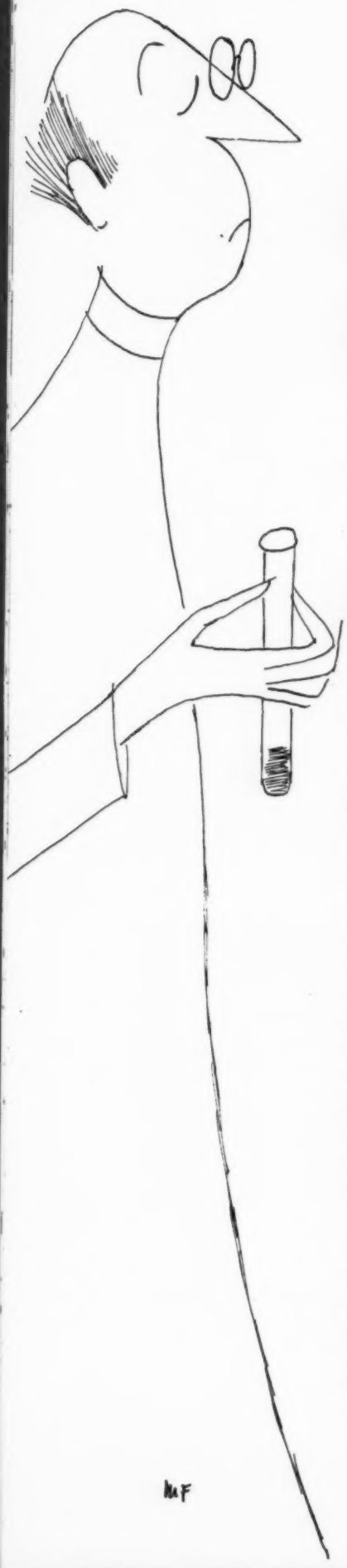
"Women who work use more beauty and fragrance preparations than any other consumer group. They sell themselves and each other on new beauty and fragrance preparations. Women who work spend more time in the public eye, but more important, they are making the family income one and one-half times what it used to be."

Coty executive vice-president, Jean Depres pointed out that "Women buy beauty with their emotions, but they buy drugs, sundries, and other toilet preparations with their heads. Very few men recognize this fact; and that is why occasionally a sales promotion lays a goose egg. If I were a sales manager, I would memorize that slogan and put it in my notebook to use as a guide. . . .

"There are two customers in every woman. If you are selling beauty preparations, creams, lotions, lipsticks, nail polish, rouge, face powder, sachet, dusting powder, talcum, eye shadow, mascara, fragrance, perfume, toilet water, solid cologne—God knows how many things women want and need—then you are selling to the romantic Mrs. Consumer. But perhaps you don't sell to the romantic Mrs. Consumer, but you are selling such things as drugs, proprietary medicine, cleansing tissue, razor blades, baby bottles, roach powder, then you are dealing with an entirely different personality. You are dealing with a thrifty, practical, hard-headed ruthless baby; and if you cheat her, God help you!

"The romantic Mrs. Consumer will buy that $40 hat and consider it well worth the price, especially if she is going out for a new man in her life. No matter how

(Continued on page 553)



A Pharmacologist Looks at Proprietary Drugs*

by Dr. M. H. Seevers

UNIVERSITY OF MICHIGAN SCHOOL OF MEDICINE

Most academicians, including the speaker, adhere uncompromisingly to the policy that the *primary* function of a university scientist and physician is to acquire facts by well-controlled experimentation and observation and to express opinions based solely on these facts irrespective of other considerations. This is as it should be.

If, as is commonly the case, the academician permits himself the luxurious concept that this is his sole function and that he has no obligation to society to interest himself in the ultimate use of the facts which he acquires, his life will be an easy one. He will remain scientifically unassailable and morally beyond reproach. He will not permit himself, for example, to be involved in controversial problems which may arise between industry and regulatory agencies. Grays will not appear on his canvas since he can deal exclusively with blacks and whites.

Such a cloistered existence, which in the past was more common than at present, does not make any pretense of considering, except possibly superficially, the relative importance of the facts which will be acquired, their quantitative relationship one to the other, or their utilitarian value to society. It is strange then that many scientists of this philosophy, and many laymen who are in need of advice, believe in all honesty that insulation from reality qualifies such persons uniquely to be advisors to industry on the one hand and to regulatory agencies on the other, presumably because they believe that from their invulnerable position they can survey controversial issues as scientific abstractions with a minimum of bias. This policy, in general acceptance among pharmacologists, until 1930 did more to prevent the development of that field than any other single factor. Indirectly, it was a major factor in denying to your industry the counsel and advice which it should have had in earlier days.

It will soon be apparent to you, if it is not already, that neither share this point of view nor has he adhered to it as a pattern of activity. I am in accord with the gradually growing philosophy that an additional function of the academic pharmacologist and one of only slightly less importance, especially if he is a physician, is to engage actively in consultation and in practice with both industry and government in order to gain the necessary perspective to consider intelligently those drug problems which may have large sociological significance. I believe that only by knowing at first hand the two extremes, is it possible to arrive at the non-extremist

*Delivered before Proprietary Association May 23, 1952.

(Continued on page 546)

A Physician Looks at Proprietary Drugs*

by Dr. Robert T. Stormont

SECRETARY, COUNCIL ON PHARMACY AND CHEMISTRY,
AMERICAN MEDICAL ASSOCIATION.

Inasmuch as most of the products you manufacture are intended for over-the-counter sale and use in self-medication by the laity, I will confine my prognosticating to the so-called "home remedies." This narrows the field down somewhat and relieves me from attempting to deliver a learned discourse on the relative merits of thiouracil derivatives and radioactive iodine. Furthermore, you probably aren't especially interested in hearing the latest about what the corticotropic hormone can do for weak and rundown adrenal glands anyway. You are primarily concerned with drugs ranging from aspirin and antacids up to what the Durham-Humphrey amendment to the Federal Food, Drug and Cosmetic Act will allow to be sold over-the-counter.

I believe it is fair to predict that your industry is by no means doomed insofar as further progress in the future is concerned. Those who deplore or condemn any self-medication with proprietary drugs are not only a minority group, but they are unrealistic as well. There is no valid reason why the lay individual should be forced to consult a physician and secure a prescription if he wants to obtain some aspirin for the temporary or palliative relief of an occasional headache or minor muscular aches and pains. The individual who has a so-called simple headache is apt to obtain the relief he seeks from such medication. It is true that headache may be a symptom of a serious disease condition such as hypertension or brain tumor. Certainly it is not wise to rely upon self-medication with analgesic drugs for palliation of persistent, severe or recurring headaches. All too frequently in such instances there is a serious underlying disease condition which requires the attention and service of a physician. I am sure that none of you wishes to have anything to do with the marketing of a drug which is prone to cause serious injury or likely to do more harm than good. It must be recognized that any drug worthy of the name is also capable of causing injury. Even such a common household remedy as aspirin may cause severe reactions in sensitive individuals. Fortunately, such reactions are relatively rare and not likely to jeopardize the status of aspirin as a drug suitable for over-the-counter sale.

The vast majority of the products in which you are interested may be regarded as palliatives designed to provide temporary relief from annoying symptoms or conditions of a relatively minor nature. No one of sane mind will quarrel with the view that serious disease conditions are not amenable to self-medication. However,

*Delivered before the Proprietary Association, May 23, 1952;

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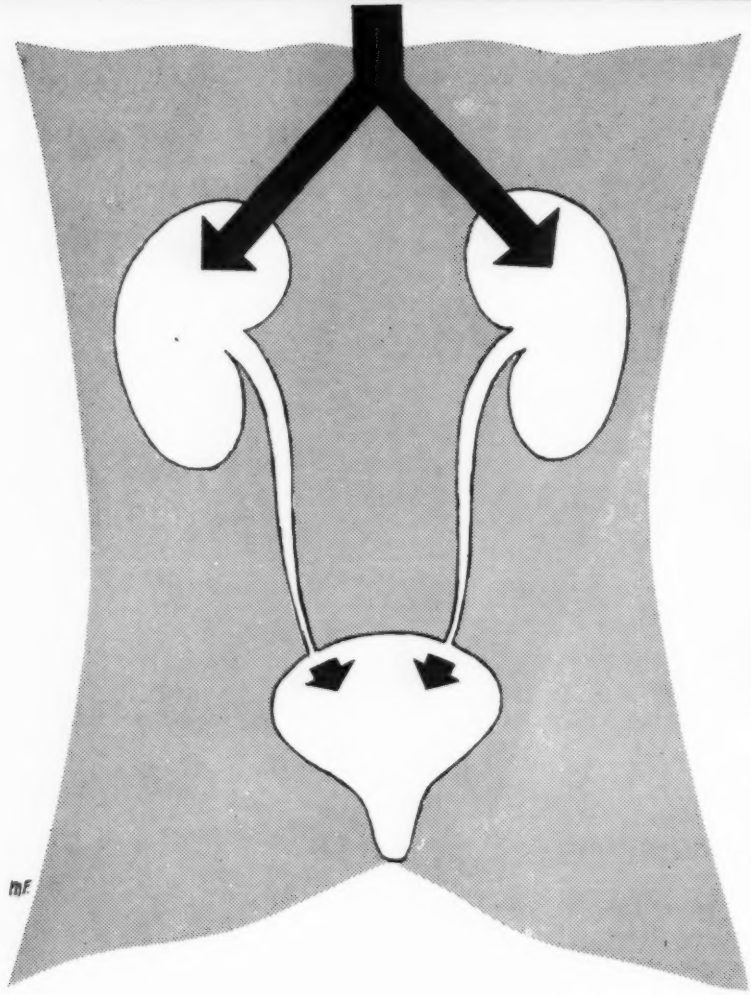


Urinary Antiseptics

by Milton A. Lesser

Remarkable progress has been made during recent years in the management of urinary tract infections. As in other fields of therapy, the urologist has made good use of the antibiotics and the newer chemotherapeutic agents. At the same time he has not discarded certain of the older drugs that have proved their worth as urinary antiseptics. Not only has the physician thus been given a greatly augmented armamentarium against harmful organisms in the urinary tract but also, through refinements in bacteriological technics, he has been able to use these agents much more effectively.

The benefits extend to the treatment of both specific infections, like gonorrhea and tuberculosis, and to nonspecific infections, which are much more frequent. Actually, urinary tract infections are far more common than is generally realized. According to authorities in the field, infections of the urinary tract are second in frequency only to those of the upper respiratory tract. Urinary infection is a common problem in children, and particularly in little girls.[3]

Some urologists classify urinary tract infections as acute or chronic. Others use an anatomical system, grouping the disorders according to whether they primarily affect the upper or lower parts of the urinary system. The former includes the kidneys and ureters; the latter, the bladder and urethra. Occasionally, the systems are combined. Fetter,[2] for example, includes in the acute, upper tract infections such clinical entities as acute pyelonephritis, acute hematogenous infections, acute suppurative pyelonephritis or cortical abscess of the kidney, and perinephritic abscess. Included in acute lower tract infections are acute cystitis, prostatitis, and urethritis. In his classification, chronic infections refer to chronic pyelonephritis, infected hydronephrosis, pyonephrosis, tuberculosis, chronic cystitis, prostatitis and urethritis.

Although older practitioners still use the term "pyelitis," modern workers feel that the expression "pyelonephritis" is more accurately descriptive of the kidney disorders. Said[4] to be the most common kidney infection, acute pyelonephritis has a rapid onset which is marked by chills, fever, abdominal pain, backache and signs of toxemia, often with an accompanying gastrointestinal upset, nausea and vomiting. While the total urinary output may be decreased, frequency and urgency may be important symptoms because of bladder irritation by infected urine. The chronic form of pyelonephritis may last for many years with re-

current acute attacks of fever, pain in the back or side, and pus-containing-urine (pyuria), with or without difficulty in urination (dysuria).

According to one report,[5] acute cystitis is the most common manifestation of urinary infection. The condition is indicated by such symptoms as frequent and painful urination and by pyuria. The acute or chronic inflammation of the urinary bladder is rarely a primary condition. Cystitis is usually secondary to an infection of the kidney, prostate or urethra. Factors that predispose to cystitis include prolonged bed rest, childbirth, certain postoperative conditions, lowered resistance and inadequate emptying of the bladder.[4]

The effective treatment of urinary tract infections depends upon a number of considerations. The first of these is the fact that the main cause of urinary infection is stasis. Whenever there is a slowing down of the normal flow, infection generally results. It is, therefore, a basic principle of treatment to determine and, if possible, relieve the complete or partial obstruction to the urinary flow.[6] In addition to this primary factor infections of the urinary tract may be caused by stones, foreign bodies, malformations in the genitourinary tract, and focal infection in distant parts of the body.[7]

Another major consideration in therapy is the selection of the proper urinary antiseptics. However, as pointed out by Rhoades, Billings and O'Conor,[8] regardless of the care with which an antibacterial agent is chosen and the persistence with which it is used, a urinary tract infection will not clear up unless obstructive lesions are corrected and foci of infection eliminated. In many cases where complete cure is not possible because these measures cannot be carried out, suitable antibacterial agents will help to minimize the infection.[4]

At present there is no known antibacterial substance capable of inhibiting or destroying all the organisms commonly causing urinary infections. Thus, in order to apply more specific and more effective therapy, it is necessary to identify the infecting organism and to administer the antibacterial agent that is most efficient in combatting it.

The infecting bacteria may reach the urogenital system by ascending the urinary tract, by going through the blood stream or through the lymphatic system, or by contiguous extension.[9] Many studies[6,8,10] have been made to determine the relative importance of the organisms responsible for the disorders. Although there are differences in the findings, there is quite complete agreement that the colon bacillus is the leading infecting organism.

The infection may be caused by a single strain of organisms, but mixed infections involving two or more bacteria are fairly common.[11] Lazarus and Wood[12] found, for example that 43.2 per cent of the positive bacteriologic cultures of urine examined by them were of mixed infection. The most frequent bacterial combination was *Escherichia coli* and *Staphylococcus aureus*.

With an increasing number of antibacterial agents and a proportionate increase in the possibility of more specific treatment, methods for identifying the infecting organisms have received added attention. In many cases, the use of Gram stain on the dried urinary sediment will suffice for the recognition of the two main types of bacteria (e.g. cocci or bacilli) and to determine if they are Gram-positive or Gram-negative.[2] With the information supplied by the Gram stain, initial therapy can be instituted with inappropriate agent.[13,14]

However, if the infection persists more adequate bacteriologic studies are required. Such investigations will include bacterial sensitivity tests made by the serial dilation procedure or the recently developed disc method.[7,15] With the information provided by such tests, it becomes easier to select the antibacterial agent to combat a particular organism.

Data are available regarding the antibiotic or chemotherapeutic agents most likely to inhibit a given microorganism. Much of this information has been tabulated for ready use by a number of workers.[5,6,8,14] There is, of course, some divergence of opinion regarding the drug of choice, but the tables do serve as useful guides. Obviously, antibacterial action is not the sole consideration in the selection of a drug. The various agents have certain effects and limitations that must be evaluated.[14] According to Carroll and Brennan,[15] the choice of a drug depends upon a number of factors including: tolerance, toxicity, tendency to develop resistance, ease of administration, effectiveness and cost.

Starting with penicillin, the antibiotics have attained an important place in the treatment of urinary tract infections. As remarked by Hinman,[14] penicillin is still the best antibiotic for its particular purpose. In his opinion, if it were used in doses comparable to those in which other antibiotics are given, it would be even more effective.

Penicillin is indicated in most coccal infections, including those due to the Gonococcus, Staphylococcus albus and aureus, and the beta-hemolytic streptococcus. However, Streptococcus fecalis, a frequent invader of the urinary tract, is unaffected by the antibiotic in most instances.[16] Although useful against many Gram-positive organisms, penicillin is of very little value for inhibiting the Gram-negative bacilli which are commonly found in urinary tract infections.[6]

However, combinations of penicillin and sulfonamides have been used successfully in mixed urinary infections caused by both Gram-positive and Gram-negative organisms.[11] Such a mixture, says Kimbrough,[17] makes a good "shotgun" treatment when complete examination is not practicable. More recently, McMartin and Milam[13] remarked that considerable evidence has been published to show that the use of penicillin and sulfonamides in combination exerts a synergistic antibacterial effect. They also noted that several preparations containing crystalline calcium penicillin G, sulfadiazine, sulfamerazine and sulfamethazine have been made available.

When streptomycin was made available, it was

(*Continued on page 557*)

Color control of face powder.

Quality Control in Cosmetics*

by J. Ritner Weaver
CHIEF OF QUALITY CONTROL, WARNER-HUDNUT, INC.

(PHOTOS COURTESY WARNER INSTITUTE FOR THERAPEUTIC RESEARCH)

The recent Delaney hearings have focused the attention of the industry on the testing of cosmetic preparations and the raw materials going into them. While the emphasis was placed on so-called "clinical testing" before a new product or a product using a new raw material reaches the market, the focus shifts rapidly to the quality control tests which will be applied after the preparation goes into routine production.

Quality control is usually considered an operation requiring considerable expense to maintain. It would be impossible to estimate, but it would make a fascinating study if a dollar value could be assigned to the savings effected by:

1. Prevention of ruined batches due to the use of substandard raw materials.

2. Prevention of loss of customer good-will due to release of substandard products.

3. Prevention of the necessity of expensive recall proceedings in the event of release of substandard products.

4. Reduction in amount of rework which would be necessary if errors were not caught until manufacturing was complete.

The application of quality control methods is not new to the cosmetic industry. Most of the major cosmetic manufacturers have for years been requiring finished products to meet predetermined standards before those products were released into commerce. This is particularly true of larger organizations such as Warner-Hudnut where the careful manufacture and rigid control necessary for the production of pharma-

*Delivered before Scientific Section, Toilet Goods Association, May 13, 1952

ceuticals is similarly applied in the manufacture and control of cosmetics. Predetermined standards have undergone marked changes with respect to rigidity of specifications and scope of examination. Products which at one time were subjected to "a look, a smell, and a feel" are now required to meet increasing standards of chemical composition, physical characteristics, and consumer acceptability. Precise instruments such as the spectrophotometer, the penetrometer, the viscosimeter are but a few of the techniques which are providing objective measurements of characteristics which could be only roughly approximated by subjective means. These increased standards have resulted in the manufacturer who has become more exacting and the consumer who has become more demanding.

The purposes of quality control are many and constitute a lengthy list of specific objectives. All of these objectives are directed to one end; and that end defines quality control of cosmetics: the end that the product which reaches the consumer shall have the maximum consumer acceptability which is consistent with practical economical levels of production.

The definition of specifications must be one of the first objectives of a quality control system. It would be comparatively easy for a quality control group to set up specifications which, if adhered to, would quickly specify production (and with it, itself) right out of business. Obviously, whether the specification is for a raw material, an intermediate or a finished product, it must be one with which the producer can live and will result in a product acceptable to the consumer. Such specifications can never be considered static and must be subject to constant review; upward as the ability to meet them increases or in some cases downward when the standard has been set out of reach. In these days of allocation and short supply, many raw material specifications are constantly in need of reconsideration. In addition to the specifications for raw materials as set forth in the various "biblical" publications such as the U.S.P., the N.F., T.G.A., etc., there are many instances where a manufacturer will require additional characteristics, all of which must be clearly defined for the supplier of such raw materials. One of the most challenging problems of the quality control chemist is the establishment of tests which will insure the uniformity of raw materials which are not clear cut chemical entities. Actual trial of such a raw material in a small batch of product followed by accelerated stability tests are often of value. Too often, however, the appearance of a vexing precipitate or an emulsion breakdown in the months after the batch has been produced attest to the variability of such raw materials and to the fact that accelerated stability tests are not a complete indication of what will happen to the product during months of shelf storage. However, in spite of such shortcomings, rigid control of raw materials can go far in preventing the production of rejectable end products. Certainly the loss of one raw material is easier to bear than the loss of an expensive end product.

(Continued on page 542)

Mr. Weaver observing a chemist doing an electrometric titration.

Influence of Lay Press on Prescriptions

by William T. Doyle

VICE-PRESIDENT, ORGANON INC., ORANGE, N. J.

One evening about two months ago, I was in a physician's office in connection with the preparation of this paper. A well-dressed man about fifty years of age pushed his head through the half-closed office door, and said: "Doctor, my wife just read in tonight's newspaper a story about a new drug for high blood pressure. It has a long chemical name, but I knew you would know all about it—so down I came. Honestly, Doctor, do you think it would help me?"

The doctor's answer was probably not as enthusiastic as the anxious patient expected. "Well, John", said the medical man, "I have not read tonight's paper yet. But I will check into this new drug you describe, and if it is indicated in your case I will see what I can do about getting some."

Without doubt many physicians all over the United States were being asked the same question by their hypertensive overwrought patients.

In one way this experience again demonstrates the power and influence of the lay press on modern medical practice. It also, however, points up the tremendous responsibility all the segments of public health have to the sick and worried. Medicine, pharmacy, and pharmaceutical research are guardians of the public's health, and it is up to all of us to make certain that when the occasion arises the press is given the complete facts without coloring, and in easily understandable lay language.

*An address delivered before the Pharm. Economics Section of the American Pharmaceutical Association, August 19, 1952, Philadelphia, Pennsylvania.

Frequency of Articles in Lay Press

Over the period January through June of 1952, the author has found an average of—

43 articles per month in lay magazines on medical subjects, and 11 stories per day in three New York and Chicago newspapers. This average, of course, does not include medical feature columns conducted by some well-known physicians. It is further estimated that 100 million or more of the United States population comes into contact at least once each week with medical articles in the lay press.

There is no question that today the United States is the healthiest nation in the world. The public expects and deserves the latest information to keep it healthy and strong. Americans are living much longer. The older half of the population dying in 1950 had lived 66 years or more; in 1900 only 30 years or more. During

the same time, the general death rate has been cut almost in half—a saving of more than one million lives a year.

Total United States population has doubled since 1900, but the population 65 years of age and older has quadrupled. This is due largely to saving the lives of infants, children and young adults so that they live to be 70 or 80. An American mother today has better than 999 chances of 1000 to come through childbirth safely . . . . the best record in our history and, on a comparable basis, the best in the world. Her baby has a good chance of living to be seventy. A baby born in 1900 had an average life expectancy of only 49 years.

A Survey of Newspapers

As a result of the great progress that has been made toward better health and larger lives, we find tremendous interest on the part of the public in medical articles. A recent survey by the National Association of Science Writers revealed that—

1. Science news space in newspapers has doubled during the last ten years.
b. Medicine and public health rank first in terms of public interest.

As far as subject matter is concerned, the author's study would indicate that stories concerning cancer, heart disease, poliomyelitis, arthritis, and allergy are of the most interest. All articles in the lay press relating to these diseases get excellent readership.

Mr. Steven Spencer of the Saturday Evening Post explained the view of most newspaper and magazine editors when he said recently that: "No informed person expects science to move forward at a steady, unchanging pace. It is inevitable that medicine may occasionally take three steps upward and then find it must back down one step to secure a firmer foothold—but it has made a net gain of two steps. Surely the public is entitled to witness this progress, no matter how irregular and interrupted it may be. It is the science writers' contention that the public should learn of new developments touching on its health just as soon as a number of qualified physicians feel that the developments have promise and that they have been *tried out sufficiently to justify continued use*. Those who are ill need all the hope and encouragement they can find, and they find a great deal in the good news of medicine's accomplishments. The disease which a patient is suffering may be incurable today, but his faith in medical science may help sustain him until the arrival of tomorrow's successful treatment."

Lay Articles and Prescription Trends

With the fine cooperation of the management of three well known pharmaceutical companies plus the excellent market research facilities of the Research Society, Inc. of Boston, the author was able to develop three case histories showing the influence of articles in the lay press on prescription trends. Of course, it was necessary to disguise these case reports so that detection would be very difficult—if not impossible.

Case One

Product A had been on the market for almost one year. Its sales volume was running at the rate of approximately 1900 units per month. At the end of the first year a new clinical indication was uncovered which widened the scope of the market many times. The clinical results were timed to be presented at an important medical meeting.

The publicity committee of the medical association arranged for press releases. Within thirty days after the announcement of a new use for a not-so-new drug the sales in terms of packages increased from the 1900 units per month to 18,300 units. This rate of increase continued for ninety days and then leveled off at approximately 7400 units per month.

Case Two

Product B had been on the market for three years. Its sales volume had been static for more than a year at about 10,000 units per month. A public relations program was undertaken based on a new series of clinical studies. At the end of eighteen months, the product had registered increases at just double its previous volume, or around 20,000 units per month. Since then there have been two minor drops in sales, but at this date the sales curve has stabilized.

Case Three

Product C was a new one. Coincident with its introduction a series of papers appeared in the medical literature praising its usefulness. The sales forecast were conservative in view of stiff competition from two somewhat similar products. A public relations program was launched to tie-in with the clinical findings. Within thirty days following the introduction of this product, the original sales forecast was jumped 400 per cent.

The sales curve continued to show an upward trend for eighteen months, and then levelled off where it has earned a very profitable niche for itself.

Within a few months another series of articles in the lay press is expected. As with the most successful public relations programs, the campaign is planned around some new and encouraging clinical findings by reputable investigators.

Comment

Today, the United States Public is more health conscious than ever before. This change has been brought about through better education, a longer life-span, and a more conscious and responsible public press.

Pharmaceutical manufacturers have been of great assistance in bringing about a more acute awareness of good health. Through intensified research the manufacturer has become the development centre for such important contributions as sex hormones, vitamins, sulfa drugs, cortisone, ACTH, the antibiotics, the antihistaminics, and many more.

When you stop and realize that the average pharmaceutical company spends almost $30,000 per research worker per year, it becomes very evident that the trend

(Continued on page 556)

NOW... you'll feel better in the morning

MEYER BROTHERS DRUG CO. MEYER ESTABLISHED 1852

The Meyer Brothers Drug Company, with its headquarters in St. Louis and houses in New Orleans, Little Rock and Memphis, manufactures its own line of products, some of which are shown here. They also wholesale and distribute an entire drug line.

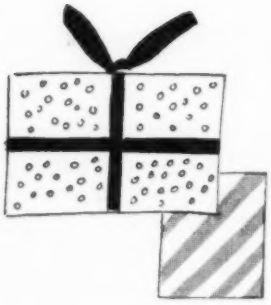
This company is celebrating its 100th Anniversary this year. It was established in 1852 by C. F. G. Meyer and ever since has been an important name in the drug industry.

Just as her mother, and probably her grandmother, too . . . this little lady relies on Meyer Brothers Columbia Brand Milk of Magnesia. And you'll find that this custom of turning to Meyer Brothers Drug Company products is well established in many, many families.

The custom of calling on Crown for closures is mighty strong and ever growing among packers of drugs, cosmetics and toiletries. They know from long experience that Crown Closures meet their requirements for dependable sealing . . . trouble-free performance on production lines . . . complete customer satisfaction. What more could you ask for? Make your very next closure order Crown Closures. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

Approved by millions of housewives



Packaging and Selling

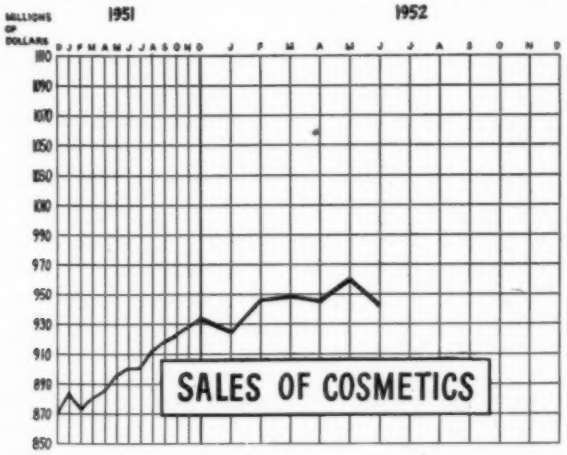
A Vast New Market for Medicine

There is a vast area of disease in which the pharmaceutical companies, so far as we know, have done very little research or attempted in only minor ways to find an application of their present products. This area is the fungus, bacteria and virus diseases which are causing many hundreds of millions of dollars of loss to economic crops and comes under the science known as plant pathology.

There is a great deal of research being done in this field but it is largely confined to the Federal Department of Agriculture, State Experiment Stations and Agricultural Colleges and has lacked the daring and imagination which private enterprise has brought to diseases of mankind and farm animals caused by similar and related organisms.

To take just one minor sector of plant diseases, we appear to be threatened by new organisms which can cause great loss to the United States. It was only a few years ago that the American Chestnut was practically wiped out in this country within a short period of time. Now we find that the American Elm is similarly threatened and there does not seem a great deal of hope for saving this magnificent tree. Within the last year a disease has been discovered in the Southern states seriously affecting the Sweet Gum tree, one of our most important commercial woods and now a report comes out that one of the Western states has discovered a new fungus disease on the Oak tree which might possibly threaten this essentially valuable hardwood.

Retail sales of cosmetics for the twelve months ended with June 1952 totaled $942,230,000. This compares with $960,406,000 for the twelve months ended with May 1952 and with $898,369,000 for the twelve months ended with June 1951.



Almost every one of our important crops, whether it is fruit, vegetable, grain or grass is subject to some kind of a destructive disease caused by a fungus bacteria or virus. The losses from these diseases in farm crops alone, mean an annual colossal loss to the American economy.

It is only within the last 15 years or so that the pharmaceutical industry, that is particularly the ethical pharmaceutical companies, discovered the animal field as a huge and profitable new market adding many millions of dollars to the industry and closely paralleling the research and development work they were already doing for human diseases.

It is not beyond the range of possibility that some of the products of this industry or some of the methods of application can make a large contribution to this serious problem of plant disease which seems to be growing in destructiveness faster than present research can keep up with it.

The need for pharmaceutical research in this particular field may be especially important since research in plant diseases has been largely directed either through contact sprays or the destruction of the organism during some period of its life cycle. Some research has taken place in soil treatment so that the plant has been able to resist the disease organism through substances taken up from the soil and deposited in the cells of the plant. In other words, plant pathology seems to be moving very much in the direction of medication rather than the traditional method of applying external sprays. In spite of an accumulated fund of knowledge on plant physiology a great deal still remains to be explained regarding even the simple processes of plant life. The movement of nutrients and fluids through the trunk or stem to the leaf area and in return from the leaf to the roots is not yet properly understood or explained. Nevertheless, somewhere in this movement of fluids, either from the soil into the roots, or from the leaf, or from injection into the cells of trunk or stem where the fluid movement takes place, may be the answer to a future control of plant disease.

Certainly we must move somewhere in this vague direction and find a solution for such fungus diseases

as now threatens the Oak. The impossibility of continually spraying all of the Oak or Sweet Gum trees in the United States means that through this traditional method, we have very little hope of saving these important forest products.

Cosmetic Tie-In

Adding to a growing list of tie-in sales between cosmetics and the products of other industries is the new Revlon tie-in with the new Remington Typewriter. The advertisements which will appear in Charm and Glamour will have the theme "Perfection at Your Fingertips". The copy appeal is aimed at typists and stenographers who play an important part in the selection of typewriters for the average small office.

Vacation Cosmetics

More than one quarter of all United States vacation families purchased cosmetics and toiletries for their trips in 1951. Purchases per family for vacation purposes averaged $4.11 and 5,574,000 vacation families spent $22,908,000 for cosmetics and toiletries, both for and while on their vacation trips. This is the data given in a recent survey just issued by the Curtis Publishing Company.

Lesson in Distribution

One of the oldest and most difficult decisions to make in advertising has been whether distribution should proceed advertising. That is, whether a man who has sufficient capital could afford to take the long gamble and use advertising to force distribution, or whether advertising should be held up and localized and made to trail along behind distribution. There have always been advocates of both of these schools and plenty of successes in each method, but by and large, the very considerable gamble in using advertising to proceed distribution has made the vast majority of manufacturers go very slow.

Every once in a while some manufacturer with a sufficiently interesting product has been able to plan and contract for his advertising, but before this appears he has gone out through the trade and managed to sign up enough retail accounts to have the stock on hand by the time the advertising appeared so that he would be able to assure himself that the advertising would function without too much waste.

One of the hardest problems in our industry, that of reviving an old product which has lost a lot of ground and lost a large part of its distribution would normally be denied any sensible basis for preceding advertising with distribution or of persuading enough retailers to again take a chance on this product before the advertising appeared.

Just recently one of the companies in this trade purchased a toilet article which at one time, that is up until about 15 years ago, had a prominent position in its market. This product drifted with hardly any advertising effort all these years and has so substantially lost ground in a highly competitive field that its sales are now largely insignificant. The name, however, is favorably remembered and the company which purchased this product believes that aggressive selling and aggressive advertising will restore it to a satisfactory volume in a competitive place in its particular field.

This new owner started with a plan that they would specifically contract for a large advertising campaign, including 8 pages in Life, some of them color, the first of which would be a spread, if they could be assured of reasonable distribution before this advertising got too heavily underway. According to a prominent food broker who tells this story they found the going very slow in the drug trade, with the druggists loath to pick this product up again and wholesalers willing only to say that they would see what they could do. At this point the company turned to the food brokers and, according to this one food broker who operates in the Southeast, he had within one week signed up 28 rack jobbers who guaranteed to place this product in their racks and this, according to the food broker, gave excellent, adequate supermarket and grocery store distribution in his whole territory, covering practically every town and city of importance.

The broker said that similar records were being made in other parts of the country.

In a nut shell, a company in this industry bought a product that had been pretty well battered around and had lost a large part of its distribution. On the basis of contracted advertising space running from $400,000 to $500,000 within a little over a week, it secured national distribution in grocery stores with a guaranteed shelf position. It would be awfully hard for the drug trade to better that record.

Expanding Self Service

The highly intriguing question "brand loyalty" is undergoing some severe investigation. In a recent series of surveys in which cereal is the latest product studied, only 10 per cent of the families gave undivided loyalty to one brand.

Here is how the full survey works out: Undivided loyalty, 12.5 per cent of the families; divided loyalty, 22.7 per cent; unstable loyalty, 18.2 per cent; no loyalty, 46.6 per cent. A great many manufacturers who are spending many thousands of dollars in advertising and who have established a brand which they feel has national recognition, are rather shy about objectively facing the very serious question of brand loyalty. Nevertheless, it is there as one of the critical problems of marketing and without question the degree of brand disloyalty is one of the primary causes of increasing costs in distribution. The whole trend of this last decade to spend more and more money at the point of sale in demonstration, P.M., and a regular grab bag of other assorted dealer allowances can be traced in large part to the shaky condition of the loyalty of consumers to very many brands.

So far as we know nobody has ever made a serious study of the cause of brand loyalty. To what extent does it depend upon the consumers' desire to continually change to something new, that is, the feeling that variety is the spice of life or to what extent must advertising be questioned either in its inability to establish

Catch women the easy modern way

Package in Plaxpak® Squeezable Bottles

Packaging that stopped women in the 1940's won't even slow them down in the 50's or 60's. In girding yourself for the fast merchandising foot race ahead, consider the Plaxpak plastic bottle. Here's packaging as contemporary as the isotope, yet as futuristic in outlook as interplanetary travel. Here's unique convenience for your product . . . *unbreakability, squeeze dispensing and lightness.* As for color, look at a rainbow . . . it's yours to use in capturing the eye.

PLAX CORPORATION Subsidiary of Emhart Mfg. Co. WEST HARTFORD, CONNECTICUT

In Canada: Plax Canada, Limited, Toronto — District Sales Offices: New York, Chicago and other principal cities.

Plax® blow-molded products made under U.S. Pats.: 2128239, 2175053, 2175054, 2230188, 2230190, 2260750, 2283751, 2349176, 2349177, 2349178.

Here's the cap for high-speed lines

You can get greater speeds on your lines with Armstrong's new "Hi-Tork" Molded Caps. Here's why:

"Hi-Tork" caps are built especially to take the abuse of high-speed lines. They're strengthened at points of stress to resist extra torque and impact. Their recessed design leaves no projections to chip or cause breakage.

The greater contact area of their threads also gives them greater strength with less strain. All these improvements combine to give you greater output with fewer rejects and less downtime.

We'll gladly help you test them on your own lines. Just call your near-by Armstrong office or write Armstrong Cork Co., Glass and Closure Div., 1910 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S "*HI-TORK*" MOLDED CAPS

Molded for extra production on high-speed machines

full conviction of quality or to the fact that it is not making a very deep consumer impression, or to what extent under present conditions of mass production at a given quality level can the value of the product be questioned?

We would hesitate to state that there has been an increasing degree of brand disloyalty over this last decade because there are no figures to back up any such statement. Nevertheless, we have a very strong conviction that people are increasingly casual in their choice among a number of similar competing brands in any one category of products, and we think that there are plenty of counter display tests in many kinds of stores to prove that this casualness does exist and that it points up a problem which may radically change our whole viewpoint on marketing.

Soap

For the first half of 1952 sales of soaps dollar-wise were off 26 per cent and sales of synthetic detergents are up eight per cent. This is according to a survey of the Association of American Soap and Glycerine Producers.

Odor and Production

A French Chemist is reported to have uncovered a close relationship between odor and working capacity by treating the interiors of factories with various odors. This chemist claims that he has been able to stimulate activity and to increase the output in some cases as much as 20 per cent. Women are said to react more favorably than men in these tests.

There has been quite a bit of work done in this country on the use of odor for industrial purposes. So far as we know, however, all or the majority of these projects have had a negative purpose, that is, to eliminate an unfavorable odor which was harmful to plant morale, causing restlessness and absenteeism and in this respect decreasing production

Just recently one of the largest paper companies in this country solved an industrial problem through the use of an odor in one of the plants of this company where the pulp was being manufactured for craft paper. A very objectionable odor, which seemed to be a combination of sulphur dioxide and one of the mercaptans, caused a great deal of trouble and dissatisfaction in the factory and a great many complaints from the residents in the surrounding community. This odor has just been almost entirely eliminated through the use of a counteracting aromatic to such an extent that the factory workers are completely satisfied, the townspeople are happy and the directors of the company are delighted to authorize an expenditure for this aromatic which will exceed $80,000 a year.

This is not an isolated case. There are in fact around the country very many similar cases that have received little or no publicity.

The American temperament does not seem to lend itself very well to the use of a perfume or odor substance that would be employed on the positive basis of making more pleasant or more congenial working conditions. Businessmen seem to take about the same attitude toward this that they have taken toward music and although in a few cases music has been used with success and traceable results in improved production, almost all business is apt to look upon anything of this kind with tolerant amusement and a remark recalling the famous advertising program of "contented cows." Up until 15 or 20 years ago business had this same attitude toward the use of color and its affect on human temperament. Factory interiors were either unpainted or painted in a severely practical fashion for the purpose of protecting factory walls and with no thought at all in regard to a possible psychological effect on the worker and on production.

Now we have what is usually called color engineering and sometimes color dynamics and a considerable number of business leaders are thoroughly convinced that there is a practical dollar and cents side to the use of proper colors in interior factory decoration and to distinguishing machine parts and operations.

It is a great pity that some intelligent research can't get underway to follow through with a study of odors and their positive effects just as has been done during this last decade with color. Maybe this French chemist, who is not identified in the report that we heard, is on the track of something that will be enlightening and will give some impetous to research of this kind.

Lessons to Be Learned from Food Operating Costs

This industry is beginning to be very conscious of the food industry. As the volume of packaged cosmetics and drug products increase in sales in food stores, as they have consistently been doing, it follows as a matter of course the people in this industry including retailers, wholesalers and manufacturers, are going to examine more and more the marketing methods used by the food people.

Up until a few years ago the people in this industry thought of the food trade very much as they have apparel, tobacco, soft drink or any other industry; that is they accepted it as part of the economy, something that in a business way was separate and apart from their interests.

The actual fact is that a large part of the food industry's business is in package consumer goods sold over the retail counter in just about the same way that the majority of the products in our industry are sold. A striking difference in the food industry, however, is the efficiency of operation that has been developing in the last several years. The contrast between the overhead cost of a drug store, even among the more efficient drug stores or the stores of drug chains, and the grocery supermarket is rather shocking and the mark-up on which a grocery store can make a profit is a startling contrast to the mark-up necessary for a drug store to make a profit.

In the same way the food wholesaler is operating on a basis that seems to be beyond the hope of the fondest dream of the drug wholesaler. This is brought out by the New Jersey Food Wholesaler who recently entered the toilet goods business on a straight wholesale operation and who states that he will deliver all the major cosmetic brands to food store on a flat 10 per cent charge for wholesaling.

KEEP YOUR POWDER DRY

in handsome Continental containers

To keep your powder fresh, there's nothing better than Continental metal containers.

They seal out moisture, air, and light, and guard the quality of a powder right down to the last grain. They're light in the hand and plenty strong.

We make powder cans in many sizes and shapes with dispensing heads of every kind. And we know how to protect the effectiveness of all manner of foot powders, bath powders, tooth powders, and baby powders. Our designers are masters at giving these sturdy packages sales-winning appeal; our lithography makes them sing. For more details, just give us a call.

CONTINENTAL CAN COMPANY

CONTINENTAL CAN BUILDING • 100 East 42nd St., New York 17, N. Y.
EASTERN DIVISION: 100 East 42nd St., New York 17 • CENTRAL DIVISION: 135 So. La Salle St., Chicago 3 • PACIFIC DIVISION: Russ Bldg., San Francisco 4

Because of active competition in food wholesaling these people are now in the process of still further reducing costs. The most efficient among them can now operate on a percentage of 6 per cent or very little over that, over cost. One of the striking ways in which food wholesalers are now reducing cost is through the preprinted order form.

The preprinted order form is growing in popularity. It reduces sales expense in a number of ways and just as important it cuts out a lot of routine time for the wholesaler salesman and permits him to devote this time to merchandising work, store display and promotion which gives the wholesaler a chance for increasing the volume of his business. Apparently the retailer likes this preprinted order form too because it cuts down the time he has to spend with the wholesalers salesman in checking his stock and he can instead select his own time when things are not so busy to make up his list of wants.

The time has undoubtedly come when every branch of this industry should find it very profitable to make a thorough study of food marketing methods with an open mind to accepting any method which would cut costs and increase efficiency.

Brand Loyalty

The expansion of self-service selling in non-food stores appears to be moving in both directions, that is up and down.

An increasing number of department stores have been introducing self-service in various degrees as part of the operation in that department. The usual practice in department stores introducing self-service is either to set aside a section of the department or to use a large aisle table and to feature in the department only those medium priced products that are heavily advertised and, as has been proved in the grocery store, requires no personal service to complete the sale. So far as we know, no department store of any size or standing has completely converted the cosmetic department to self-service.

On the downward side the conspicuous example that is creating national attention is the opening of the first self-service store by Woolworth. In a sense the Woolworth operation, as with other variety stores, could in the past be called semi-self-service, because to a very large extent at these Five and Dime counters the customer would pick and choose what they wanted themselves. Now in the new Woolworth store, it will be no longer necessary for the customer to hang around until he can catch the clerk's attention before a product can be paid for and put in a bag.

Among the steps which will convert the typical Woolworth operation into completely self-service are the following:

1) A collapsible shopping bag will be given to each customer as they enter, partly for convenience, but even more to discourage people from slipping any one of these dozens of small items into their pocket and conveniently forgetting this at the check out counter.
2) The check out counter will be set up in the front of the store in the typical style of the supermarket.
3) Information clerks which are elsewhere variously known as hostesses, etc. will be available in various parts of the store to pitch in with self-service.
4) Display islands will be used frequently instead of the regular counter space.
5) Each item will be prominently stamped with the price.
6) It is reported that nationally advertised brands will be given greater display space and that many items will be packaged with multiple packaging to increase the unit of sale.

Cute Figuring Needed

Just to show what can happen to the supermarket when it starts spreading out, the Big Bear Food Markets in Detroit are employing hostesses to help busy shoppers. If a customer doesn't have time to stand in line in one of the sections the hostess will take the order and then chase the shopper to add this product to the basket. Supermarkets who try to be little department stores without finding department overhead creeping up on them, are going to have to do some cute figuring.

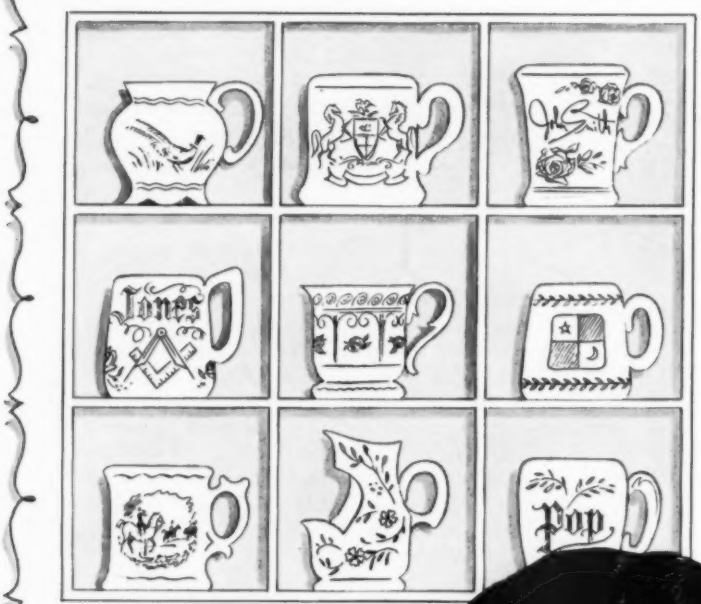
Another Tie-in Promotion

Here's another tie-in promotion to add to the large number of tie-ins that appeared to be becoming so popular with this industry. Lentheric's Tweed fragrance will be tied-in with Martex Terry Tweed towels in a store and consumer promotion which will sell the "Tweed idea". Stores are offered a special package which includes displays for window and interiors. A free linen closet sachet package of Tweed fragrance will be given to each buyer of Terry Tweed Towels and Tweed fragrance will be supplied to stores that have a lobby atomizer or fountain.

Self-Sticking Label

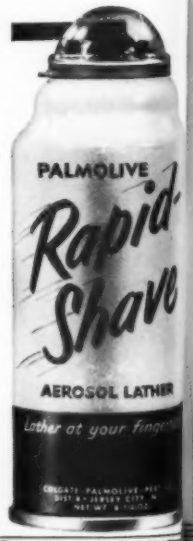
Goodren Products Corp., 136 West 21st St., New York, recently introduced "Goodstix," a new transparent moistureless self-sticking sign, and product, label. No glue or tape is required, for when using the Goodstix, all that is necessary is to peel off the two protective strips on each end and press the self-sticking area down. They can be used for streamers, posters, signs, shelf strips, and instruction labels, and can be written on with china price-marking crayon.

SPRA-TAINER Does It Again!



The Old

The J. B. Williams Co.,
Glastonbury, Conn.



Colgate-
Palmolive-Peet Co.,
Jersey City, N. J.

ANOTHER GREAT AND
GROWING USE FOR
CROWN
SPRA-TAINER

Order Changeth . . . to NEW!

Boyle Midway, Inc.,
New York City

Alfred D.
McKelvy Co.,
New York City

Dyna-Shave, Inc.,
Chicago, Ill.

Mennen Co.,
Newark, N. J.

Consolidated
Royal Chemical Co.,
Chicago, Ill.

Campbell
Products Co.,
Bensenville, Ill.

The world's most popular Shaving Creams are now pressure-packaged in Crown SPRA-TAINER, for creamy-foamy-instant lather at the touch-of-a-finger. SPRA-TAINER'S exclusive "No Side Seam—No Top Seam" construction protects products better; its "modern-design" *sells* products *faster!* If your product can be dispensed in a foam or spray it belongs in SPRA-TAINER.

The same creative ingenuity and technical skill which characterizes SPRA-TAINER is also reflected in Crown's complete line of cans for almost every industry.

CROWN CAN

Division of

CROWN CORK & SEAL COMPANY

Philadelphia, Chicago, Orlando, New York, Baltimore, Boston, St. Louis

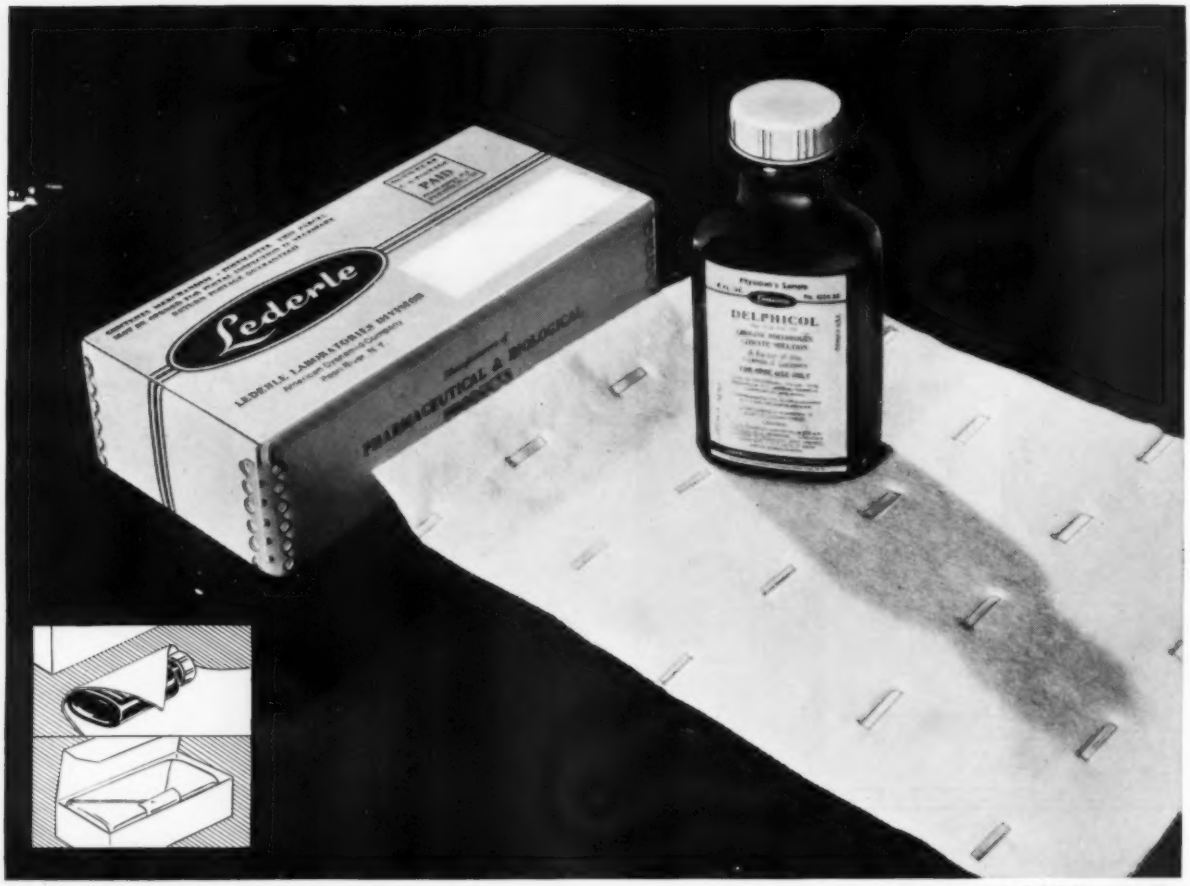


Photo courtesy Lederle Laboratories Div., American Cyanamid

Custom Protection

—the safe, smart way to package pharmaceuticals

Do you know how easy it is to prevent damage in transit—speed up packaging operations—and reduce shipping costs? You *will* know—when you try Kimberly-Clark Interior Packaging—KIMPAK*—a modern packaging material of unlimited versatility that provides *custom protection* for every type of pharmaceutical product. KIMPAK is especially suited for mailing liquid samples, since it will absorb up to 16 times its own weight in liquids within 30 seconds. KIMPAK is suggested in the Official Postal Guide not only for its absorbent qualities, but because it acts as a *cushioning* agent as well. It protects the most delicate products against damage in transit from shock, vibration and rough handling, yet is light enough to offset recent rate increases. KIMPAK is clean, soft and sanitary—as easy to apply as wrapping paper. And it's available in a wide variety of roll and sheet dimensions, in various thicknesses, with and without backing—to suit your specific need in the custom packaging of any type of pharmaceutical product. For complete information, write to Dept. J-10, Kimberly-Clark Corporation, Neenah, Wisconsin.

KIMPAK INTERIOR PACKAGING

A Product of **Kimberly-Clark**

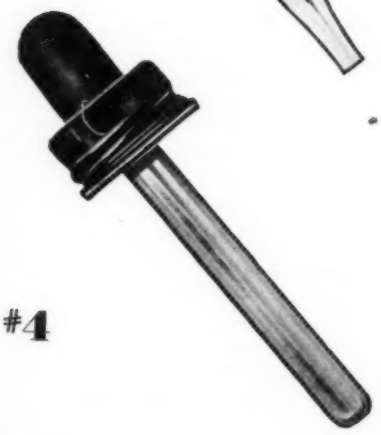
*T. M. REG. U. S. & FOREIGN COUNTRIES

A BETTER DROPPING PART MAKES A BETTER PRODUCT

#1

#2

#3



#4

To Be SURE Your Liquid Preparation Can Be Properly Dispensed

SPECIFY

New Perfection

DROPPING PARTS

Many a fine product has been rejected by the public simply because some seemingly small detail was below standard. The dropping part can be such a detail—an apparently simple device, yet vital to the user's satisfaction.

Since 1931, when Pennsylvania Glass originated the screw-cap dropping part, we have specialized in this important dispensing unit. This advantage in experience and specialization has made NEW PERFECTION Dropping Parts everything their name implies. Longer experience and undivided attention to one product have resulted in superior quality and reliable performance. To be sure of the best—specify NEW PERFECTION Dropping Parts.

We can supply various colors of bulbs in natural rubber or in our special oil-resisting Amekine compound, caps of plastic or metal in many sizes and colors, and various types of dropper glasses in any length with calibration in any color or plain. New Perfection dropping parts will fit your own bottles, or can be supplied in combination with our Modernistic bottles in Amber, Blue, Green or Clear glass. Sizes: 2cc, ⅛, ¼, ½, 1 and 2 oz.

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

Doings

Squibb has prepared Spectrocin (Squibb Neomycin-Gramicidin), a new antibiotic combination in ointments and troches. It may be administered topically without danger of sensitizing the patient to antibiotics that are used orally or parenterally for serious disorders. It is effective against many gram - positive and gram-negative organisms, including those responsible for most superficial bacterial infections of the skin, eyes, mouth and throat.

Otis E. Glidden & Co. are offering new sample-packages of Zymelose laxative tablets for distribution through druggists. Each package, made up like a match cover, and compact enough for pocket or purse, contains six tablets. Two layers of heat-sealed cellophane keep the tablets separated and protect them from contamination. Pharmacists requiring a free supply are invited to write the manufacturer at Waukesha, Wis.

Mennen is distributing a new aerosol-type shave lather, Foam Shave, on a national scale. The lather is prewhipped at the press of a button, and no lathering-up is necessary. It is packaged in a red-and-green 6½-ounce pressure container which provides a minimum of 100 shaves and retails for 79 cents.

Smith, Kline & French Laboratories have introduced Drilitol Spraypak, a new companion form of the present Drilitol Solution. Advantages of the Spraypak are that it combines the superior coverage of a spray from a full-sized atomizer with the economy of a nose-drop bottle. It is ready for immediate use by the patient and costs no more than Drilitol in solution form.

Bristol-Meyers has re-introduced the smallest size of regular Ipana tooth paste, the Guest Size, fair-traded at 10 cents. It had been taken off the market because of material shortages which have now eased up.

Schering Corp. has prepared Prantal Methylsulfate for peptic ulcer and other conditions where it is desirable to reduce gastric acidity and motility of the stomach. It also effectively curtails hyperhidrosis. Because of its selectivity of action, side effects are rarely produced, according to the manufacturer.

George A. Breon & Co. has introduced two high-potency vitamin products and a potent protein hormone. Breonex-M, used for parenteral injection, contains a high concentration of the principal components of the Vitamin B Complex, and is indicated especially when there is need for high potency, greater certainty of absorption, or rapid improvement of acute conditions of B-complex deficiency. The other vitamin preparation, Ducobee, is offered in 1000 mcg. per cc. and 100 mcg. per cc., and is a crystalline vitamin B_{12} preparation. It has great therapeutic value in non-hematologic conditions. Its primary indication is in the relief of pain in migraine, and in relieving the symptoms of osteo-arthritis and osteoporosis.

The hormone product, called Riogon, is chorionic gonadotropin, obtained from human pregnancy urine, which is prepared in a desiccated powder with accompanying diluent. For intramuscular use only, it is used in the treatment of cryptorchism, functional uterine bleeding, and has proven beneficial in some cases of common acne.

Winthrop-Stearns has prepared Pipanol Hydrochloride, a potent antispasmodic for use in Parkinson's disease, in elixir form. The product is being offered in 16-ounce and one-gallon sizes, supplementing the bottles of 100 scored tablets of 2 mg. previously available.

The Paul B. Elder Co. has introduced Benoquin, a new ointment for the treatment of disorders of hyperpigmentation resulting from an increased amount of melanin in the skin. It is said to inhibit melanin formation in human skin with depigmentation usually observed after one to four months of continuous treatment. It is packaged in 1¼-ounce and 1-pound jars for prescription only. Duraglass bottles and metal closures are supplied by Owens-Illinois Glass Co.

Lederle has put a new vitamin-mineral supplement on the market in liquid form for geratric patients. Called Gevrabon, it is a pleasant-tasting elixir, a companion to Gevral Capsules, and contains B factors, iron, iodine and other minerals, and 18 per cent alcohol.

Organon Inc. has announced that Covisten, its new steroid-vitamin-mineral preparation, is available for physicians' prescriptions. It may be used for all patients, young or old, who need the stimulus of steroidal-nutritional support.

Rilling Dermetics has added a new shampoo to the Dermetics line of hair preparations, known as Super Rich. It is said to be a completely new formula containing all the known plus-ingredients which will leave the hair radiant, shining, lighter than air

She's in the market . . .

Empress molded closures give your product sales appeal . . . convenience.

—then the package helps her pick your product

Some things just make people reach for them. They look so fresh, so clean, so attractive.

It's that way when your package is right from top to bottom. The right closure is the finishing touch.

So if you want a package with personality—an efficient package that truly represents your product and keeps it up front in sales appeal, give it the sales plus of a *sales*-minded closure.

CLOSURE DIVISION — **OWENS-ILLINOIS GLASS COMPANY**

TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

NEW!
YOUR
SOLID COLOGNE
IN A
PROPEL-REPEL
CONTAINER*
cal umet
Swivelpak®
Solid Cologne Dispenser
A genuine invention in solid cologne packaging.
NO MUSS NO FUSS
• Exclusive Airtight Urea case.
• Purse size: capacity ⅛ oz.
ECONOMICAL
• No molding required.
• Material can be poured directly into container.
• Eliminates foil wrapping.
CALUMET Manufacturing Co., Inc.
565 Fifth Avenue, New York 17, N. Y.
MUrray Hill 8-4270
*PAT. PEND.

Doin's ... (CONTINUED)

The Wm. S. Merrell Co. has prepared Kolantyl Gel with a 4th factor which produces an antilysozyme effect for more effective ulcer therapy. It is combined with an improved antispasmodic, a demulcent, and two antacids: one for rapid neutralization of excess stomach acid, and the other, for its prolonged antacid effect.

Merrell has also introduced Kolantyl Gel, a new and useful adjunct in the treatment of peptic ulcer. It contains Bentyl hydrochloride, for relieving painful spasm associated with ulcers, and also two antacids to neutralize excess stomach acidity, magnesium and aluminum hydroxide gel.

Wyeth has introduced Tablets Bicillin L-A (long acting), which are prepared by a special process from the new, tasteless salt of penicillin, dibenzylethylenediamine dipenicillin G. They are used in the treatment of pneumococcal, streptococcal and gonococcal infections and prophylactically, to prevent secondary infection after tonsillectomy or tooth extraction.

Winthrop-Stearns has introduced Ntz Nasal Solution, a new double-acting antihistaminic - decongestant, which contains Neo-Synephrine hydrochloride, Thenfadil hydrochloride and Zephiran chloride. It may be applied by droplet instillation, nebulizer or tampon.

Squibb is providing Pentids Soluble Tablets, the first soluble penicillin tablets containing 200,000 units of penicillin G potassium, as a companion dosage form of Pentids. The Tablets, readily soluble in water, milk formulas and fruit juices, are especially intended for infants and children, and adults who object to swallowing ordinary tablets. They are available in bottles of 12 and 100.

Marvin R. Thompson has introduced Martussin-MRT, a new, pleasant tasting, non-narcotic cough syrup for use on prescription only.

Smith, Kline & French Laboratories is introducing Toryn, a non-narcotic compound for cough control, which appears to act specifically on the cough center by reducing the sensitivity of the cough reflex. Toryn possesses all of the effective antitussive action of codeine but does not cause constipation, has no effect on respiration, does not depress the patient and has a low toxicity.

Sandoz Pharmaceuticals has developed Fiorinal Tablets for the treatment of tension headaches and related types of head pain. During clinical study this product was also found to be effective in sinusitis pain.

Stanley Drug Products is distributing Buticaps, an internal nutritional skin treatment. It contains Vitamin F from linoleic and linolenic acid, which combats the causes of skin irritations internally; lipotropic ingredients which reduce fatty accumulations around the liver; amino acids, which are important to cellular structure of the skin; and lecithin, a soy bean concentrate.

Plax Corp. has a new, pocket-size squeeze bottle atomizer, the Spraz Mistizer, now being sold in drug stores.

Endo Products Inc. has released Cumertilin Tablets, a basically new mercurial diuretic for oral use which offers maximum clinical effectiveness while making possible fewer mercurial injections. They are indicated as supplemental or maintenance deuretic therapy in salt retention edematous states, particularly, edema of cardiorenal disease.

Schenley Laboratories has announced two new high-potency dosage forms for Aquacillin-A.S., both supplied in a disposable syringe that can be assembled ready for use in 4½ seconds. Aquacillin-A.S./600, containing 600,000 units of procaine penicillin G per injection, and Aquacillin-A.S./1 million are supplied in the new Ogle syringe.

Abbott has a new disposable syringe, the Abboject, designed for greater convenience in repository penicillin therapy. It is already filled, thereby simplifying preparation for injection and assuring accurate dosage. A single 600,000-unit dose every 48 hours of the Abbocillin-DC product supplied in the Abboject is adequate for treatment of mild to moderately severe penicillin - susceptible infections. It is for deep intramuscular use only.

Sharp & Dohme has released Aramine Bitartrate, Intranasal Decongestant, and its accompanying dispenser, the Mijit Atomizer, for the relief of nasal congestion. Aramine is said to be a superior nasal decongestant which provides prolonged, gentle relief with virtually no irritating effect to the sensitive epithelium of the nose.

Monsanto Chemical Co. has announced the commercial availability of an improved, non-irritating bacteriostat for deodorant soap and similar products. The new product will be sold under Monsanto's trademark of Actamer. Actamer is said to be particularly effective in the presence of soap against gram-positive cocci, often the cause of boils, carbuncles and similar minor skin infection. The product is expected to be used not only in deodorant soaps but also in shampoos, shaving creams and other cosmetics, and in presurgical scrubbing soap for hospitals.

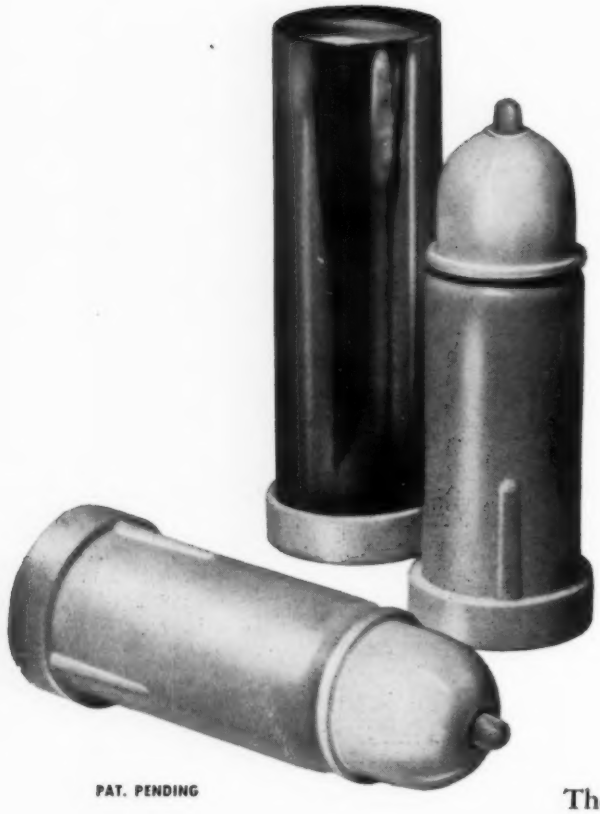
RICHFORD SPILLPROOF PERFUME FLACONS

The magic, purse-sized perfume flacon still making sales history is now joined by a new Richford Creation, also destined for fame.

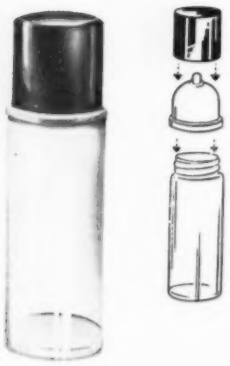
RICHFORD TOUCH-N-FLO*

PURSE DISPENSER

*TRADE MARK



PAT. PENDING



Available with polished brass slip-on cap for glass or plastic containers.

The one perfect purse container for Lotions, Cream Sachets, Liquid Soaps, and Deodorants, etc.

TOUCH-N-FLO will not leak, yet the contents flow easily with a gentle touch to the skin. Unbreakable plastic bottle and sure-acting dispenser handsomely covered with a snug gold metal cap. Contents 10 cc.

Write for Samples and Prices.

THE RICHFORD CORPORATION
251 FOURTH AVENUE NEW YORK 10, N. Y.

Today's Modern Sampler

Cross Swing Sifter Sampler

So good for sales! So easy to fill!

In the face of current selling conditions, distribution of product samples is rapidly becoming a necessity. And these Cross round miniatures provide the modern answer for the perfect sampling container.

Dressed as an exact replica of your full size container, patented Cross Swing Sifter Samplers are sure-fire for sampling all sorts of powders such as cosmetics, food, drugs, pharmaceuticals and anything else that can be dispensed through a shaker or a sifter.

LOW COST FILLING

Almost any standard filling equipment can be used to fill Cross Samplers. Just fill the inner section, and then slip the outer part over it. Then a simple twist of the top, and your product flows freely.

Ask for a representative to show you samples and discuss your problems.

CROSS PAPER PRODUCTS CORP.

4377 Bronx Boulevard New York 66, New York

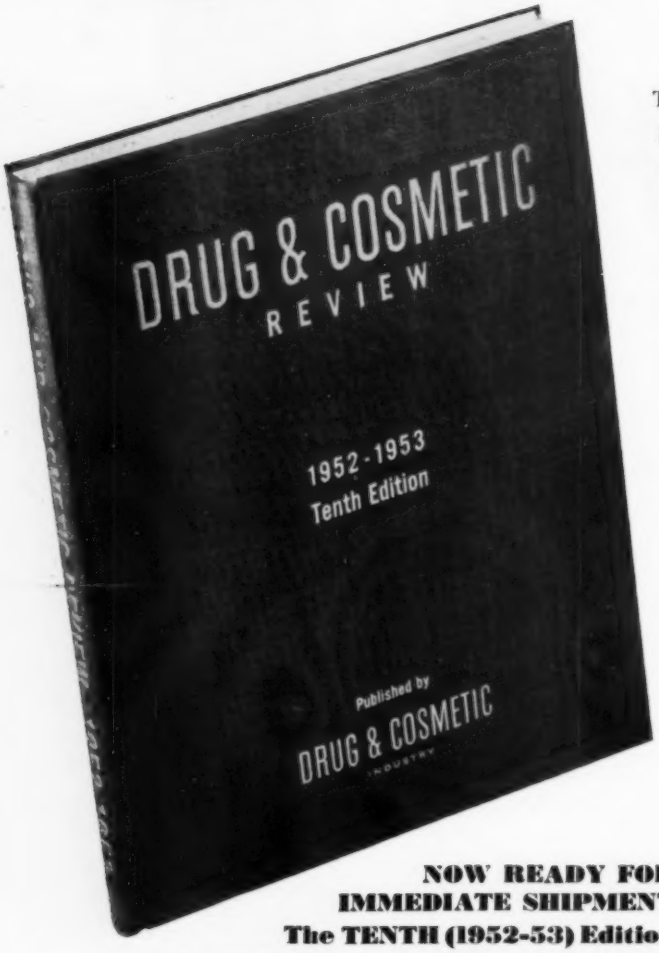
DESIGNERS • CREATORS • MANUFACTURERS OF INDIVIDUALIZED ROUND AND OVAL PACKAGES

Greatly Expanded

to better serve the Industry

the new 1952-53 *tenth edition*

Drug & Cosmetic Review



Added Feature: 1.

TRADE NAME INDEX. Over 4,000 Trade Names! In the general field of supplies—chemicals, raw materials, packages and equipment—it is sometimes difficult for a buyer or interested consumer to locate the name and address of the owner of such products when only the brand or trade name is known. This Section will be useful in determining the name and location of the manufacturer of such products.

Added Feature: 2.

IMPORTS RAW MATERIALS. Import figures for all drug, cosmetic and related raw materials in quantity and dollar value for a five year period (1947 through 1951).

Added Feature: 3.

MODERN FORMULATION. Twenty pages of formulas and instructions for making drug and cosmetic products.

Added Feature: 4.

NEW FORMAT for easy access to company advertisements—many in catalog form.

NOW READY FOR IMMEDIATE SHIPMENT

The TENTH (1952-53) Edition

Beautifully Bound (Gold Stamping) Over 400 Pages

$3.00 in the United States

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Expanded:

5. Price Movements—Raw materials (1951-1941)
6. Directory of Packages and Packaging Materials Suppliers
7. Directory of Machinery and Equipment Manufacturers Suppliers
8. Directory of Raw Materials Suppliers
9. Associations of the Industry—with complete membership lists of all the leading Associations.

Buyers, Chemists, Perfumers, Plant Managers, Executives of Drug and Cosmetic Manufacturing companies in the United States and over 36 foreign countries have used this reference book profitably for more than twenty years. Its expanded scope makes the NEW Drug & Cosmetic Review more valuable than ever!

DRUG & COSMETIC INDUSTRY, 101 W. 31 ST., NEW YORK 1, N. Y.

We can supply fine quality handmade glass containers made to private mold specifications or in a stock design such as the one illustrated. They can be furnished plain or with fired-on ceramic labels.

CARR-LOWREY GLASS CO.

Designers and manufacturers of fine glass containers

Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

Do you use any of these Fine Chemicals in your Processing?

Acetic Acid, 'Baker Analyzed' Reagent, Glacial A.C.S.

Ammonium Acetate, 'Baker Analyzed' Reagent, Crystal, A.C.S. and Purified, Crystal

Ammonium Sulfate, Purified, Granular

Bismuth Nitrate, Purified, Crystal

Bromine, Purified

Calcium Chloride, Purified, Anhydrous, 4, 8, 12 and 20 Mesh, Granular and Purified, Anhydrous, Lump

Hydrochloric Acid, 'Baker Analyzed' Reagent, A.C.S.

Iodine, U.S.P.

Magnesium Carbonate, U.S.P., Light Powder and Technical, Powder

Magnesium Oxide, U.S.P., Powder

Nitric Acid, 'Baker Analyzed' Reagent, A.C.S. and Technical

Picric Acid, N. F., Crystal (10% water added)

Potassium Hydroxide, 'Baker Analyzed' Reagent and U.S.P.

Sodium Hydroxide, 'Baker Analyzed' Reagent and N. F.

Sulfuric Acid, 'Baker Analyzed' Reagent, A.C.S.

Tin Crystals (Stannous Chloride)

The increasing use of chemical synthesis in the creation of new therapeutic drugs means a widening demand for fine chemicals for use in processing rather than just as ingredients.

Above you will find listed a number of these fine chemicals which are in regular use by our customers. If one or more of these chemicals interests you, please write. We will be glad to quote prices and send you specifications. Address: J. T. Baker Chemical Co., *Executive Offices*, Phillipsburg, New Jersey.

Baker CHEMICAL

Baker Chemicals

REAGENT • FINE • INDUSTRIAL

News...

DCAT Elects Officers

Lloyd I. Volckening, president of the Ivers-Lee Co., was elected chairman of the Drug, Chemical and Allied Trades section of the New York Board of Trade at its 62nd annual meeting. Additional officers the next fiscal year are Stanley I. Clark, vice-president, Sterling Drug Inc., as vice-chairman; Hugh S. Crosson, McKesson & Robbins, Inc., reelected as treasurer; Helen L. Booth, reelected as secretary. James G. Flanagan, vice-president, S. B. Penick & Co., was reappointed counsel.

LLOYD I. VOLCKENING

The DCAT met at Pocono Manor Inn, Pocono Manor, Pa., from September 25 to 27. Charles M. Macauley, president of Charles M. Macauley & Associates, retiring chairman, was elected section representative to the board of directors of the New York Board of Trade.

The new executive committee includes: Murray Breese, Murray Breese Associates; Ralph A. Clark, J. T. Baker Chemical Co.; Harold F. Cummings, Vitamerican Oil Corp.; Donald S. Cushman, Innis, Speiden & Co.; Dudley Dunlop, Mallinckrodt Chemical Works; Howard B. Fonda, Burroughs Wellcome & Co. (U.S.A.); Claude A. Hanford, Pharmaco, Inc.; J. David Hayden, Gelatin Products Division, R. P. Scherer Corp.; William W. Huisking, Chas. L. Huisking & Co.; Harry C. McKenzie, Ortho Pharmaceutical Corp.; George S. McMillan, Bristol-Myers Co.; J. Wayne Luther, Druggists' Supply Corp.; W. Boyd O'Connor, Ayerst, McKenna & Harrison, Ltd.; Fred G. Singer, E. I. duPont de Nemours & Co.; Sydney N. Stokes, Merck & Co.; and Stephen F. Urban, E. R. Squibb & Sons.

Pepsodent Promotions

Edward R. Fatzsinger has been promoted to food store manager and William Dodenhoff, to division sales manager for New York, by the Pepsodent division of Lever Brothers Co., according to Raymond F. Underwood, sales vice-president.

Ricketts, V.P. of Strong, Cobb

M. M. Ricketts, formerly general manager of the Pharmaceutical division of Commercial Solvents, has been elected vice-president of Strong Cobb & Co., Inc., according to George Miller, president. He will become general manager of Strong Cobb's American Chlorophyll division in Lake Worth, Fla.

M. M. RICKETTS

Mooney Named Dolcin President

Charles A. Mooney has resigned the presidency of Lentheric Inc. to become president of Dolcin Corp. and its associated companies, replacing Victor van der Linde who has become chairman of the board. He will also direct the six foreign manufacturing Dolcin companies. W. P. Morrison, vice-president in charge of sales has resigned.

These changes are part of an expansion plan on the part of Dolcin, extending into various pharmaceutical lines and cosmetic specialties.

Glattes Promoted by Parke, Davis

George F. Glattes has been promoted to assistant branch house superintendent of Parke, Davis & Co., according to Graydon L. Walker, director of U. S. and Canadian sales. He will assist Leonard E. Johnson, branch house superintendent, in the management of the company's 26 branches in this country and Canada.

Lorr Takes Over Marquise Dupond

Lorr Laboratories inactivated its subsidiary, Marquise Dupond Corp., on October 1, and absorbed all of its activities.

Buys Innis, Speiden Depts.

Morningstar, Nicol, Inc. has acquired the Jersey City factory (480 Henderson St.) and natural gums and absorption base departments of Innis, Speiden & Co., according to Joseph Morningstar, Chairman of the board. The gums include gum Arabic, karaya, tragacanth, locust bean and gum ghatti, all of which will continue to be processed in the Jersey City plant.

Edward O'Grady, formerly manager of these departments, has joined Morningstar in the same capacity. The new unit will be reorganized as the Natural Gum and Absorption Base Department of Morningstar, Nicol, Inc. The Innis, Speiden name will not be used.

EDWARD O'GRADY

The Innis, Speiden wax department will subsequently be transferred to Frank B. Ross Co., Inc., 4-10 Ash St., Jersey City, whenever that company is able to absorb the operations in their own plant.

Morningstar, Nicol, Inc., which celebrated its 100th anniversary last year, operates 4 plants, and distributes its products through several subsidiaries, including Aroostook Potato Products, Inc., Houlton, Maine; Paisley Products, Inc., Chicago and New York; Layton Elastic Glue Co. and Park-Leggett-Altman Co., Chicago. They also act as sole selling agents for New England Starch Co., Houlton & Mars Hill, Maine; Magic Valley Processing Co., Twin Falls, Idaho; and several other starch and dextrine producers.

Schum in New Arner Post

Howard F. Schum, purchasing director, has been appointed to the newly created post of assistant to the president of the Arner Co. His former position will be jointly taken over by Florence Pellman, who will be purchasing agent in charge of supplies and equipment, and by Mildred McCollum, who will be in charge of drug and chemical purchasing.

Toni Dedicates New Labs.

The Toni Co., a division of the Gillette Co., formally dedicated its new modern research laboratories in the Merchandise Mart, Chicago, on August 26. Dr. Austin Smith, editor of the Journal of the American Medical Association, was guest speaker.

St. Louis DCAT Officers Installed

The following new officers and directors were installed by the Drug-Chemical and Allied Trades Association of St. Louis at its first meeting of the new year on September 4: Fred L. Thielemann, McKesson & Robbins, Inc., president; Harley A. Eckhart, Miles Laboratories, Inc., 1st vice-president; Louis J. Kirchhoff, J. B. Williams Co., 2nd vice-president; and Fred J. Lence, Abbott Laboratories, secretary and treasurer. Directors are Edward R. Bolling, the Gillette Safety Razor Co., Alf. W. Pauley, Lambert Pharmacal Co.; Eugene T. Luning, Narco Drug Co., Inc.; William J. McMillan, Pevely Dairy Co.; and Sidney Drought, Bristol-Myers Co.

Koch, Witco Eastern Sales Mgr.

Lester D. Koch, a vice-president of Witco Chemical Co., has been made eastern sales manager of that company and will handle its line of chemicals including metallic stearates, paint driers, stabilizers and plasticizers. He will continue to supervise the operations of the export-import department as he has in the past.

LESTER D. KOCH

Dr. Lewis Retires from Penick

Dr. Thomas Lewis, vice-president and technical director of S. B. Penick & Co., has retired from that firm after 22 years of service, according to S. B. Penick, Jr., president, because of the pressure of personal responsibilities, particularly in the United Kingdom.

Attending dedication of modern research laboratories of the Toni Co., division of the Gillette Co., in Merchandise Mart, Chicago, are, left to right: S. DeWitt Clough, former chairman of the board of Abbott and member of the board of Gillette; R. N. W. Harris, Toni president; and Dr. Austin Smith, guest speaker, and editor of the A.M.A. Journal.

Seeland on Penick Staff

Frank Seeland, for the last seven years with Prentiss Drug & Chemical Co., Inc., has joined the staff of the insecticide division, S. B. Penick & Co.

Rawlins in Production Post

Albert L. Rawlins has been appointed director of products development of Parke, Davis & Co., according to Dr. L. A. Sweet, vice-president and director of research. His responsibilities will include conversion of medical agents from experimental stages to forms suitable for production and use, and the development of improved forms of already-established products.

ALBERT L. RAWLINS

Brown With Merck 30 Years

David R. Brown, office sales representative in the medicinal manufacturing sales department, Merck & Co., Inc., is celebrating his 30th year with the company. Since 1928 he has been engaged in various purchasing and sales activities, including assignments at the company's Pacific Coast branch, Los Angeles, and its Canadian subsidiary.

Burrough Bros. Changes Ownership

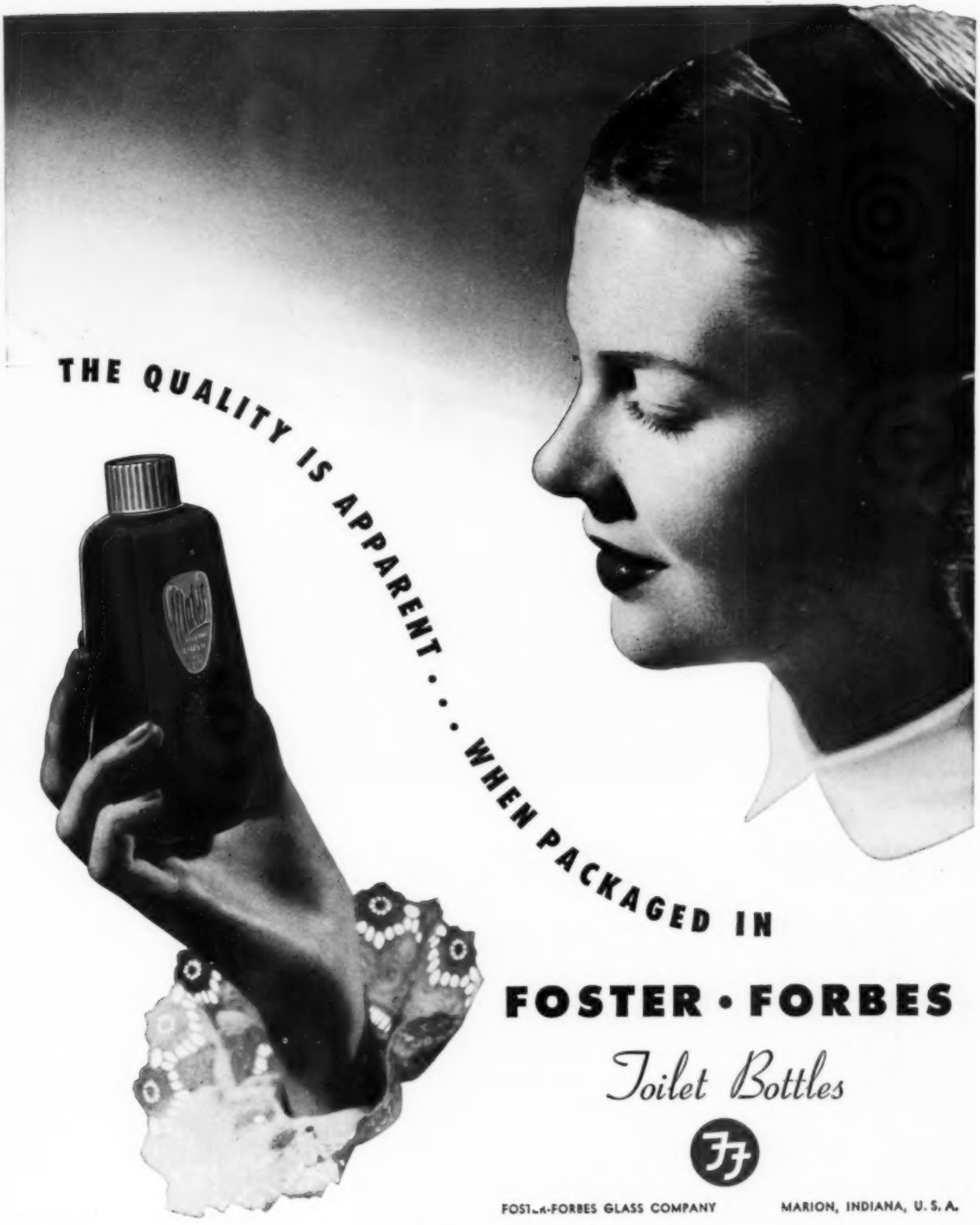
The Burrough Brothers Manufacturing Co., 89-year-old pharmaceutical house, formerly owned by the Mutual Drug Co. of Ohio, has been taken over by Benjamin Gaboff and Norton W. Mailman. Burrough Brothers, one of the few firms in the country still manufacturing a complete line of U.S.P., N.F. and standard preparations, such as extracts, elixirs, tinctures, pills and tablets, as well as the complete wet and dry lines, will continue to supply their wholesale drug accounts with the same high-quality products.

Mr. Gaboff, a pharmacist, with many years of drug manufacturing experience, is now president of the company, and Mr. Mailman, president of John Chatillon & Sons (New York), manufacturers of scales, cutlery and precision springs, is vice-president and a member of the board. Dr. Anthony LaCourse remains vice-president and general manager in charge of all manufacturing operations. J. Harris Sanner, assistant secretary and treasurer, will continue to handle finances and purchases.

The new ownership plans to expand the present facilities of the company as rapidly as possible and add as many new and timely items to the current catalog as advisable.

Danco Heads Fund-Raising Div.

Gerard J. Danco, president, Gerard J. Danco, Inc., has accepted the chairmanship of the cosmetics division in the 1952 Fund Raising Drive of the Travelers Aid Society of New York. He joins 117 other business leaders in this city in helping to raise the 1952 goal of $406,000.


THE QUALITY IS APPARENT . . . WHEN PACKAGED IN
FOSTER • FORBES
Toilet Bottles
FOSTER-FORBES GLASS COMPANY
MARION, INDIANA, U. S. A.
SALES OFFICES
KANSAS CITY
DETROIT
CHICAGO
CLEVELAND
MILWAUKEE
CINCINNATI
LOUISVILLE
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INDIANAPOLIS
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NEW YORK
MEMPHIS
HAVANA, CUBA

Kimble Opticlear Vials come in eight popular sizes

Keep food products dry and attractive with KIMBLE OPTICLEAR VIALS

Modern food and confectionery merchandising demands packaging which is both modern and useful. On the retail shelf and counter, your package should catch the customer's eye and close a sale. On the pantry shelf, it should keep contents fresh and dry.

Kimble Opticlear Vials give your product such a package. Opticlear Vials are gleaming and crystal clear. Their special plastic stoppers seal tightly, shut out moisture and air. Here's how they solved a packaging problem for one confectionery manufacturer.

THE SKYLINE STORY

Problem: B-Deks, a food decoration manufactured by Skyline Products, Inc., was originally packed in transparent bags. Once the bags were opened, air entered and discolored the contents. Even more of a problem, tiny B-Deks worked their way through folds at the bottom of the bag and rolled around the cabinet shelf.

Solution: B-Deks were packed in Kimble Opticlear Vials. The beautiful glass walls of these practical containers show B-Deks to their fullest advantage. And special stoppers seal tightly even after repeated opening and closing. Now, B-Deks win more sales . . . make more profits.

See how attractive your product can look in Kimble Opticlear Vials. Send us the sizes you use and we'll ship free samples for your inspection.

KIMBLE GLASS COMPANY

Toledo 1, Ohio

Subsidiary of Owens-Illinois Glass Company

Gilmore, Upjohn Board Chairman

Donald S. Gilmore, president of the Upjohn Co., was elected chairman of the board last month and managing director, succeeding Dr. L. N. Upjohn who resigned. Dr. E. Gifford Upjohn, an executive vice-president, was elected president. These changes will become effective on January 1, 1953, while all other officers of the company will remain the same.

DONALD S. GILMORE

Mr. Gilmore, a president of the company since 1944, will maintain his active role and have general supervision of the firm's policy as board chairman and managing director. He is also serving as president of the American Drug Manufacturers' Association.

Dr. L. N. Upjohn, who served as president from 1930 to 1944, will remain as a member of the board of directors.

NYU Aromatics Course

Samuel Klein, consulting perfumer, who is in charge of the aromatics laboratory course being offered by New York University's division of general education, has added the literature of flavoring and perfumery as a new topic for discussion. The class began meeting on Monday evening, September 22, and will continue through 15 weeks. It is especially designed as a practical "lab" program for persons working with flavored and perfumed products.

Visiting lecturers include Frederick J. Triest, Flavorist, Fries Brothers; John Wenneis, technical director, Norda Essential Oil and Chemical Co.; Dr. Kurt Kulka, research chemist, Dodge & Olcott, Inc.; and Ernest Shiftan, perfumer, van-Ameringen-Haebler, Inc.

Tooker Appointed by Gair

George J. Tooker has been appointed division manager of the Natick, Mass., boxboards division of Robert Gair Co., according to Herman Whitmore, vice-president.

Anderson, HIF Research Director

Odin W. Anderson has been appointed director of research, Health Information Foundation, according to William H. P. Blandy, president. He will direct the Foundation's research program which is carried on by its own research staff, and through grants of funds, by research groups in colleges and universities.

Beatrice K. Tolleris has joined the staff of HIF as assistant director of public relations, according to E. R. Leibert, public relations director. She will assist in the preparation and distribution of the Foundation's education materials on health subjects.

ODIN W. ANDERSON

Kerchmar, Baker Sales Rep.

Alfred P. Kerchmar has been named sales representative of J. T. Baker Chemical Co., according to Ralph A. Clark, vice-president in charge of sales. He will service the accounts of Baker's laboratory chemical division from headquarters in Cleveland.

van Ameringen Back from Europe

A. L. van Ameringen, president, van Ameringen - Haebler, Inc., returned September 30 on the S. S. United States from a five-month stay in Europe. He spent a month in Southern France and the rest of the time in the Paris office of van Ameringen-Haebler, S. A. R. L.

While playing golf on June 28, Mr. van Ameringen suffered a slight heart attack and was confined to a hospital for four weeks. He recovered completely and has resumed all his activities with his usual vigor, both in the industry, as well as outside.

A. L. VAN AMERINGEN

Goby Visiting U. S.

Francois Goby, president of Tombarell Freres of Grasse, France, arrived in this country September 29 for an indefinite stay. He hopes to visit all of his friends in the trade.

Stoller, Givaudan Adv. Mgr.

Leonard Stoller has been appointed advertising manager of Givaudan-Delawanna, Inc.

Opening of Bakers convention at the home of Pete Niles, Chicago manager of Fritzsche Brothers, who invited the two Baker families to a beach picnic. Left to right are Bill Baker, head of Armour Laboratories' pharmaceutical development laboratories, and wife; Bill Baker, Sr. of Fritzsche Brothers, Bill Baker, Jr., and Mrs. Baker. The two families had not met previously but the ice was quickly broken when they all read the sign Mr. Niles had nailed to a tree in the background—"WELCOME, BILL BAKERS' CONVENTION!"

HEYDEN FORMALDEHYDE

for new uses...

for expanded uses...

Here is a product that has grown extensively and is still growing to serve your needs. Heyden pioneered the commercial production of formaldehyde and has expanded its facilities steadily to keep pace with the increasing demand for this essential raw material for the chemical and allied industries.

This continued growth is based on solid foundations such as meticulous attention to special customer requirements. Supplying the highest quality product has always been a first consideration. Every effort has been made to match the purity and uniformity of the product with cooperative and helpful service from our sales and technical staffs. Extensive research on the packaging, shipping and handling of formaldehyde has rounded out the service that has helped to keep Heyden customers satisfied.

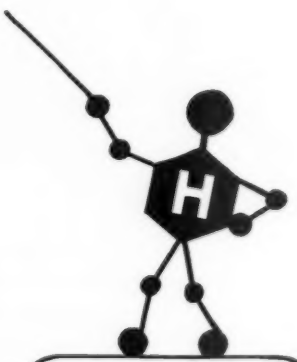
Count on Heyden for your formaldehyde supply. It is available as Formaldehyde Solution N.F. and shipped in tank cars, tank trucks, drums, carboys and bottles. A 37% methanol-free grade is also available.

PARAFORMALDEHYDE

A solid form of formaldehyde. U.S.P. X Powder, Flo Granules and Granules.

HEXAMETHYLENETETRAMINE

A dependable source of anhydrous formaldehyde for resins, plastics, chemicals. Technical and U.S.P., granular and powder.



Serving Industry through Finer Chemicals

Benzaldehyde • Benzoates
Benzyl Chloride • Bromides
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Creosotes • Formaldehyde
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Guaiacols • Hexamethylenetetramine
Medicinal Colloids
Methylene Disalicylic Acid
Neomycin • Paraformaldehyde
Parahydroxybenzoates • Penicillin
Pentaerythritols • Propyl Gallate
Resorcinol • Salicylates
Salicylic Acid • Streptomycin

FINE HEYDEN CHEMICALS

HEYDEN CHEMICAL CORPORATION

342 Madison Avenue New York 17, N. Y.

CHICAGO • PHILADELPHIA • SAN FRANCISCO • DETROIT • PROVIDENCE

Krieger Succeeds Price at S & D

Charles A. Krieger, associate purchasing director of Sharp & Dohme, Inc., has been appointed director of purchases, according to Henry W. Gadsden, vice-president and supervisor of purchasing functions. He is replacing Herbert B. Price, who retired September 1.

CHARLES A. KRIEGER

Kerrigan Presents Alger Award

James J. Kerrigan, president of Merck & Co., Inc., and national co-chairman of the Horatio Alger Awards Committee of the American Schools & Colleges Association, presented a Horatio Alger Youth Award to James V. Dell' Aquila last month. Mr. Dell' Aquila is majoring in chemical engineering at Clarkson College of Technology, Potsdam, N. Y., and has been inspired by the career of Mr. Kerrigan who rose from messenger to presidency.

Ross Buys Innis, Speiden Wax Dept.

The Frank B. Ross Co., Inc., Jersey City, has taken over the manufacturing, processing and selling of the wax department of Innis, Speiden & Co. James E. Wickstead, former manager of the department at Innis, Speiden, is going along with the division. All factory operations will be moved to the Ross installations.

Palmer with Hyland Labs.

John W. Palmer, formerly with E. R. Squibb & Sons for 16 years, has been appointed director of biological production at Hyland Laboratories, according to G. Preston Snow, Hyland president.

Sandoz Increasing Detail Staff

Sandoz Pharmaceuticals is planning to increase its detail staff by 20 per cent. The company is now in the process of interviewing candidates throughout the country.

Crabtree with Crown Can Co.

George W. Crabtree has been elected vice-president in charge of manufacturing of Crown Can Co., a subsidiary of Crown Cork & Seal Co., Inc., according to John J. Nagle, chairman of the board and president of both companies. He had formerly been associated with Continental Can Co. for 20 years.

GEORGE W. CRABTREE

Eczacibasi Labs. Completes Plant

Eczacibasi Laboratories has just completed the largest and most up-to-date pharmaceutical plant in the Near East, situated in Istanbul. The buildings cover an area of 5700 square meters. The company, according to Dr. Nejat Ferit Eczacibasi, will manufacture a full line of ethical pharmaceutical products consisting of tablets, ointments, liquids, ampuls and antibiotics.

Cooley with Norda

Paul L. Cooley has been appointed Pacific Coast manager of Norda Essential Oil & Chemical Co., with headquarters at 1250 Folsom St., San Francisco. He had formerly been with George Lueders & Co. for 22 years.

Schmidt with Dammann & Smeltzer

James S. Schmidt, manager of the vanilla bean department, Dodge & Olcott, has become associated with Dammann & Smeltzer, importers of vanilla beans, according to Pierre Dammann. Mr. Schmidt is a former president of the Vanilla Bean Association and has been associated with the vanilla bean department of Dodge & Olcott for over 25 years.

Dodge & Olcott, recently bought by Fritzsche Brothers, Inc., discontinued its vanilla bean department on October 1.

Ellis Marks 50th Year at Heyden

William C. Ellis last month completed 50 years of continuous service with Heyden Chemical Corp., 40 of them as sales representative in the Chicago branch sales department. In honor of this event, Mr. Ellis was presented a $1000 coupon-type bond by John P. Remensnyder, president, and elected the second member of the Heyden 50-Year Club.

A luncheon was given for him at the Chicago Athletic Club by a group of "oldtimers" associated with the drug, pharmaceutical chemical and cosmetic industries in the Chicago area.

McNerney Named Representative

Robinson-Wagner Co. appointed the McNerney Chemical Co., 2800 East 11th St., Los Angeles, as a sales representative for that area on September 1.

Named Controller, Sterling Drug

Carl J. Singler was elected controller of Sterling Drug Inc. by the board of directors last month, according to James Hill, Jr., chairman and president.

Recent leadership sales meeting of Kremers-Urban Co. at Three Lakes, Wisconsin. Left to right, front row: Melvin Sponholz; W. Haven Black; C. D. Jones; David Sutton, vice-president domestic sales; Herbert Herrington. 2nd row: Robert J. Kremers, secretary and treasurer; R. A. Johns, president; Norma Kuechle, assistant to sales manager; S. X. Sunyak; Paul Morrow; Charles Farris. 3rd row: A. M. Stromberg; Paul Klemtner, PK Ad agency; Arthur Stroy; Dr. C. O. Miller, Chairman of the board. 4th row: Charles Swilling; Joseph Chappell; J. T. Clancy, vice-president, production; and Homer Baldridge.

CHARABOT

has come to New York

Since 1817 the fame of CHARABOT & CIE., and HUGUES AINÉ, of Grasse, France, has been the standard of excellence in the field of floral products and essential oils for perfumes, cosmetics and soaps. It is with great pride and sense of achievement that CHARABOT announces another step forward.

CHARABOT & CO., Inc., with main offices in New York City, will now serve you direct. The complete line of CHARABOT products will be available. They will be stocked in this country *in their original containers.*

In this way you will benefit from prompt service for your immediate aromatic needs *plus* expert consultation facilities which will always be at your service.

Remember . . . CHARABOT means *quality* and *service!*

CHARABOT & CO. INC.

132 NASSAU STREET, NEW YORK 38, N. Y.

Stokstad Receives Borden Award

Dr. E. L. R. Stokstad, Lederle Laboratories, was recently presented a Borden Award of $1000 and a gold medal "for distinctive contributions to the advancement of poultry science," by John H. McCain, assistant secretary of the Borden Foundation. He received the award at the 41st meeting of the Poultry Science Association at Storrs, Conn.

Dr. Stokstad, associate director of the nutrition and physiology research section at Lederle, was chosen as the recipient of this year's award because of his work with folic acid, protogen, bacterial production of vitamin B_{12}, and the growth-promoting effect of antibiotics.

Knight Named Penick Executive

Dr. Odon S. Knight, formerly of Commercial Solvents Corp., has been appointed head of engineering activities of S. B. Penick & Co. and its subsidiary, the New York Quinine & Chemical Works, Inc.

Sanders, V.P., Arner Ltd.

Roy Y. Sanders, Jr., vice-president in charge of sales of the Arner Co., Buffalo, has become vice-president of the Arner Co., Ltd., of Canada, and will take over the same duties he previously had. He is also a director of both companies.

Lanman on Schenley Med. Staff

Dr. B. Marr Lanman has been appointed assistant to the medical director of Schenley Laboratories, according to Dr. Charles E. Dutchess, vice-president and medical director. He will make his headquarters at the New York offices.

Barry with Schering

Richard H. Barry has joined Schering Corp. as head of the pharmaceutical development department and quality control division, according to Robert E. Waterman, vice-president.

RICHARD H. BARRY

Dr. E. L. R. Stokstad, right, Lederle Laboratories, receiving a Borden Award from John H. McCain, assistant secretary of Borden Foundation, in honor of his work on animal nutrition. The $1000 award and gold medal was presented at the 41st meeting of the Poultry Science Association "for distinctive contributions to the advancement of Poultry Science."

Earl with Parke, Davis

W. Albert Earl has been appointed manager of employment and employee services of Parke, Davis & Co., according to Harold K. Daniels, director of personnel relations. He has been head of the training and publications department of the Upjohn Co. since 1945.

EDMUND L. DRACH

Drach Marks 50 Years with Abbott

Edmund Louis Drach, vice-president and director of purchases, Abbott Laboratories, was honored by directors of the company on September 22 in recognition of his 50th anniversary—the longest service record in the history of the firm. Mr. Drach became associated with the company's founder, Dr. W. C. Abbott, when a 3-story building in suburban Ravenswood, North Chicago, provided all the space needed for extracting alkaloids from crude drugs. He started at the age of 15 to learn pharmaceutical manufacturing when it was still done in kitchen kettles and pans. He was placed in charge of purchasing in 1914, made a director in 1930 and a vice-president in 1947.

Parke-Davis Appointments

Frederick H. Stigale, Jr. has been appointed manager of the Philadelphia branch depot of Parke, Davis & Co.; Ernest G. Hiler has been promoted to field manager in the New York branch, and will serve under J. H. Murray, branch manager; Charles L. Linden has become assistant to the manager of that branch and will be in charge of internal operations; and A. D. MacPhail has been appointed a field manager of the Walkerville branch of Parke, Davis & Co., Ltd., according to Graydon L. Walker, director of U. S. and Canadian sales.

Mr. Stigale succeeds William H. Bevington, who has been transferred to the Denver branch. Mr. MacPhail will supervise sales territories throughout the province of Ontario and will serve under L. M. Budd, manager.

Robert M. Leffer has been appointed a field manager in the New York branch and will supervise activities in several sales territories in the New York area. He will serve under J. H. Murray, New York branch manager.

Witco Executive Changes

Thomas J. Starkie has become national chemical sales manager of Witco Chemical Co.; E. F. Wagner, assistant national chemical sales manager; C. A. Damen, assistant vice-president in charge of the Washington office; M. A. Minnig, national sales manager of rubber chemicals; and W. F. Twombly, in charge of product development. These appointments resulted from a recent reorganization of the company's executive staff.

Leg make-up . . . smooth and even with Methocel

an excellent binder and thickener

In the preparation of leg make-up Methocel (Dow methylcellulose, N. F.) offers valuable aid as a binder, film-former and suspending agent. With Methocel these preparations are smoother and more even, making them easy to apply.

Methocel, a synthetic gum, is constantly uniform in thickening power from batch to batch, completely water soluble and entirely neutral. It is colorless, tasteless and odorless.

Available in powdered form, Methocel is finding ever widening application in the development and improvement of hand and face creams, ointments, drug carrying films, surgical jellies, tablets, bulk laxatives, and in preparing emulsions of fatty, mineral and essential oils. If you haven't tried Methocel, send for a free experimental sample and valuable information on its properties and uses.

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MIDLAND, MICHIGAN

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Wide viscosity range of Methocel available—please indicate use field_____

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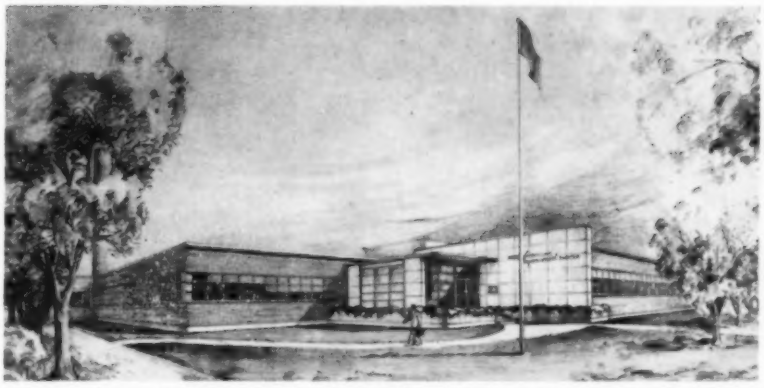
DOW CHEMICALS

Cyanamid Ltd. Consolidates

North American Cyanamid Limited has consolidated its several office and warehouse locations in Montreal into one newly-constructed building where it will increase its scope of activities by manufacturing pharmaceuticals and refining aureomycin. This move has been made to meet Canada's sharply rising demands for industrial chemicals and pharmaceuticals. Production at the new plant, it is hoped, will make North American Cyanamid independent of imports of many pharmaceutical items for the United States.

Divisions of the Canadian firm for which the new building will serve as Quebec headquarters are Lederle Laboratories, Calco Chemical division, Industrial Chemicals division, and Plastics and Resins division.



Drawing of new building recently constructed by North American Cyanamid, Ltd., to meet Canada's sharply rising demands for industrial chemicals and pharmaceuticals. Office and warehouse locations are now consolidated in this plant which opens this month.

Culbertson with Antell, Ltd.

Rae B. Culbertson has been appointed sales manager of Charles Antell, Ltd., Canadian division of Charles Antell, Inc., according to Wentworth H. Barnes, director of sales and marketing. He had formerly been with John A. Huston Co., Ltd.

RAE B. CULBERTSON

Named Cos. Stylist for Morningstar

Kathryn R. Colton, cosmetic stylist for Innis, Speiden & Co., Inc. for the past 10 years, has been appointed cosmetic stylist for Morningstar, Nicol, Inc. This firm recently purchased the cosmetic and gum department of Innis, Speiden. Absorption bases, principal item of the cosmetic department, will now be added to the Morning Star line and manufactured by them.

KATHRYN R. COLTON

Remensnyder, Heyden Bd. Chairman

John P. Remensnyder, president, Heyden Chemical Corp., has been elected to the newly created office of chairman of the board. Simon Askin, vice-president in charge of industrial relations and purchasing, and a director, has been elected to succeed Mr. Remensnyder as head of the company.

Mr. Remensnyder has been with the company for more than 32 years, having served as vice-president and director from 1944 to 1950. He is also chairman of the board and director of St. Maurice Chemicals, Montreal. Mr. Askin joined Heyden in 1943, and, since 1948, has served as president of American Plastics Corp., a Heyden subsidiary.

The board of directors at the same time discontinued the Heyden Management Committee, whose membership included Mr. Remensnyder, Mr. Askin, Dr. Ralph N. Lulek and Paul van der Stricht. Dr. Lulek continues as vice-president and director, and Mr. van der Stricht, as secretary and director.

Mennen to Move N. J. Plant

The Mennen Co. will begin moving into a modern new plant in Morris Township, N. J., about the first of the year, according to George S. Mennen, vice-president. Since its founding 75 years ago, the company has been located in Newark.

The new building will offer Mennen greatly increased production facilities and, for the first time, will consolidate office, manufacturing and warehousing facilities under the same roof. The actual moving will take place over a three- or four-month period under a schedule which calls for departments and production lines to be shifted without any loss in inventory.

Merck Buys New Warehouse

Merck & Co., Inc. has purchased a large standardized steel warehouse from the Luria Engineering Co. which it is assembling at 4545 Oleatha Ave., St. Louis, according to E. Gordon Ball, Jr., central district manager for Luria. The building, containing 24,000 sq. ft. of storage space, will serve to supplement Merck's present warehousing facilities at this central distributing point for a 24-state area.

New Branch Office for Stokes

F. J. Stokes Machine Co. has established a new branch office at 2904 Woodburn St., Cincinnati, as part of a program of sales and engineering coverage.

TGA Committee Chairmen

Benson Storfer, president of Parfums Corday, Inc., has been elected a director of the Toilet Goods Association to replace Charles A. Mooney, who resigned to enter the drug field. Pierre Harang, Houbigant Sales, has been appointed chairman of the TGA convention program committee, and Lamson Scovill, Scovill Manufacturing Co., chairman of the convention committee for 1953, according to Davis Factor, TGA president.

Baker Moves Canadian Facilities

J. T. Baker Chemical Co. has moved its Canadian warehousing facilities and offices to new and expanded quarters at 222 Front St., East, Toronto, Ontario. They had previously been at 44 Osler St.

Wyandotte Promotions

M. J. Conway has become manager of the central district of Michigan Alkali division, Wyandotte Chemicals Corp.; H. C. Brunner, manager of distributor sales; and Bert McCord, sales representative of the central district.

Mr. Conway is assuming charge of the newly created Central district, covering the entire state of Michigan, northern Ohio, northern Indiana, western Pennsylvania, western New York and northern West Virginia. Mr. McCord will assist Mr. Conway as sales representative in the central district.

Named Lever Packaging Consultant

Edythe B. Belmont, formerly product, packaging and merchandising consultant for the Harriet Hubbard Ayer division of Lever Brothers Co., has been named packaging consultant for all divisions of the company, according to James A. Barnett, consumer relations vice-president.

EDYTHE B. BELMONT

Sterwin Promotions

Lyle P. Carmony has been transferred by Sterwin Chemicals Inc. from St. Louis to Kansas City as district manager, with headquarters at 1517 Walnut St. He will represent the firm in Missouri, Nebraska and Kansas, and will continue to serve jointly with L. L. McAninch. James M. Doty, president of Doty Technical Laboratories, will act as technical consultant for Sterwin with headquarters at 8 West 9th St., Kansas City.

Replacing Mr. Carmony in St. Louis as district manager is William O. Edmunds, who will operate from the company offices at 634 North Grand Boulevard. James L. Campbell, in turn, will take over the duties vacated by Mr. Edmunds, and will represent Sterwin in North and South Carolina and parts of Virginia and Tennessee. He recently joined the company as technical sales representative.

DR. PAUL A. MATTIS

Mattis on SKF Staff

Dr. Paul A. Mattis, former assistant professor of Pharmacology at Western Reserve University School of Medicine, has joined the research staff of Smith, Kline & French Laboratories as head of the pharmacology section. He will serve under Dr. Edwin J. Fellows, director of biological sciences.

Dr. Helen E. Duell, former assistant Professor of Biology at Alfred University, has joined the company's research staff as a literature scientist.

Dedricks Win Golf Trophy

Alec J. Dedrick, vice-president in charge of sales, van Ameringen-Haebler Inc., and Mrs. Dedrick, recently received a silver bowl trophy for winning 3rd low, gross and net, in the annual Westchester County, husband and wife, two-ball golf tournament. The tournament was held at the Fenway Golf Club and included a record field of 84 participants in the ten-year-old event. The Dedricks carried the Winged Foot colors to third place with 83-13-70.

DeLamar Named President

Robert DeLamar was elected president of DeLamar-Hendrey, Inc. at a recent meeting of the board of directors. Frank Edlund has been added to the Chicago sales force.

ROBERT DELAMAR

Balgley Transferred by Heyden

Ely Balgley, in charge of applications research for Heyden Chemical Corp., has been transferred to the market development department and assigned to the promotion of new products.

Armstrong Sales Expansion

The James W. Armstrong Co., division of the McKay-David Chemical Corp., plans to expand its sales force both in the United States and South America, according to James W. Armstrong, vice-president. An extensive research program is under way to increase the number of new pharmaceuticals and biologicals, under the direction of the company's medical director, Dr. Zale Yanof.

Frederick C. Hailer

Frederick C. Hailer, 52, secretary of the Massachusetts Board of Pharmacy, and well-known proprietor of a drug store in Roslindale Square for several decades, was killed September 11 in an accidental fall from the eighth-story window of the Boston Licensing Board Office, Boston. He was a member of the Massachusetts Pharmaceutical Association, the American Pharmaceutical Association and the N.A.R.D. Mr. Hailer was a brother of Florin J. Hailer, vice-president of Rexall Drug Co. and Joseph A. Hailer, merchandising manager of the pharmaceutical department.

Surviving are his wife, Theresa K.; four sons, Frederick C., Jr., Paul, Richard, and Peter; two daughters; a sister and four brothers.

Ole Salthe

Ole Salthe, consultant on nutrition and executive secretary of the Nutrition Foundation of New York, died September 10 at Flower Fifth Avenue Hospital, New York, at the age of 68, after a brief illness. He lived at 8 McLaren Road, Darien, Conn.

Mr. Salthe served as director of the New York City Bureau of Foods and Drugs when the late Dr. Royal S. Copeland was Commissioner of Health. When Dr. Copeland was elected to the U. S. Senate in 1922, Mr. Salthe became his assistant there serving until the Senator's death in 1938. He was a former consultant to the Food and Drug Administration.

Mr. Salthe will be remembered by those who were active in consideration of the Food, Drug, and Cosmetic Act when it was before Congress from late 1933 until its enactment in 1938.

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create a style trend in smart Packaging!

Gair-Reynolds Foiline Cartons with a full range of true color reproduction on foil, are rapidly creating a new style trend in smartly designed packaging...packages that literally Sell-A-Product on Sight.

These brilliant Foil Cartons, in gold, silver and other scintillating metallic colors are endowed with the notable feature of doubling and tripling sales in competitive markets.

Increase the prestige, sales and profits of your product, with the "Selling Impact" of Gair Multicolor Foil Cartons.

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An attractive A.C.L. label and Empress closure transform Duraglas stock bottle No. A-4338 into a handsome sales package.

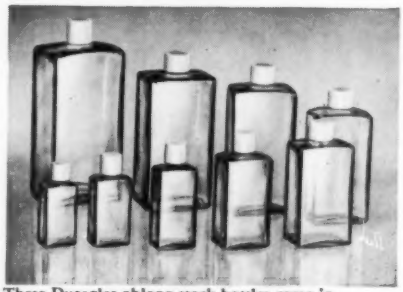
MAKE-UP makes the difference!..

Spruce up your package with A.C.L.*—the durable self-selling label

Duraglas A.C.L. labels are fused right into the glass to become part of the container. They save the cost of paper, labels and glue . . . eliminate labeling machines which increases the work space in your plant. Decide now to investigate how you can have the modern sales package your line deserves.

You can select from hundreds of unusual and economical Duraglas stock-mold containers the ones that are exactly right for your product. Then our packaging specialists, originators of the A.C.L. process, will design a label that makes your package stand out on any retail shelf or counter.

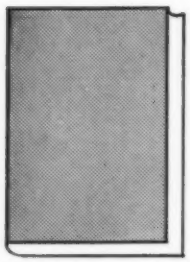
*Applied Color Lettering



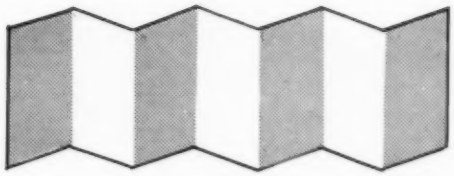
These Duraglas oblong stock bottles come in ½, ¾, 1, 2, 3, 4, 6, 8 and 12-ounce sizes.

Duraglas TRADE MARK REG. U.S. PAT. OFF. packages are protectors of quality

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES



Trade Literature



Emulsol Bulletin

The Emulsol Corporation announces the publication of Technical Bulletin No. 33, describing the Emcol 4100 series fatty amide sulfonate foamers and detergents recommended for liquid detergents, shampoos, bubble baths. The Bulletin is available from the company at 59 Madison St., Chicago 3.

Making a Cleansing Cream

Roure-Dupont, Inc., 366 Madison Ave., New York 17, has issued Technical Bulletin No. 1, entitled Making a Good Cleansing Cream. The Bulletin, written by Dr. Joseph P. Parentini who is in charge of the Technical Department of the company, covers three pages and gives several formulas.

Free-Flowing Mg Trisilicate

J.T. Baker Chemical Co., Phillipsburg, N. J., has issued two bulletins giving information concerning the company's new free-flowing form of magnesium trisilicate. This product, manufactured by a new process, is said to reduce the user's cost of an end product. Warren F. Schumacher, Fine Chemical Division sales manager, points out the following advantages of the product: Mixes readily with other ingredients and granulates easily; pours freely from drums and bottles without sticking to side walls and feeds uniformly from powder hopper; reduces dust problem and improves over-all cleanliness and efficiency of the production department; coats more evenly with powdered solid lubricants due to its unique spheroid particle shape; maintains uniform color in any finished product.

The Bulletins give properties of the product, information on its use as an antacid, and a bibliography of references on the pharmacology and therapeutic use of the product.

Pfizer Folder

Chas. Pfizer & Co., 630 Flushing Ave., Brooklyn, N. Y., have issued a descriptive folder setting forth a description of the vitamins which they offer together with information on the quantities and packaging of these products.

Electrolytic Cell Bulletin

General Industrial Development Corp., 270 Park Ave., New York 17, exclusive agent in the U.S. and Canada for Bamag-Meguin, has available an 8-page bulletin on Bamag pressure bipolar type electrolytic cells for the manufacture of pure hydrogen and oxygen. The bulletin describes in detail the operation of the electrolyzer. Several illustrations, a lay-out of a typical installation, a schematic drawing, performance curves and complete technical data make up the contents of this factual booklet.

Emery Fatty Acids

Emery Industries, Inc., Dept. 6, Carew Tower, Cincinnati 2, offers complete specifications and compositions of a wide selection of vegetable type fatty acids to meet any vegetable requirements. This selection has recently been broadened by the addition of new products and the improvement of other products. Emery 600 Distilled Cottonseed Type Fatty Acid, Emery 610 Distilled Soya Type Fatty Acid, Emery 614 Distilled Soya Type-Alkalyd Grade, Emery 618 Distilled Soya Type-Super Alkyd Grade, Emery 622 Distilled Coconut Type, Emery 630 Distilled Corn Type, Emersol 9305, 9310, 9315 Double Distilled Liquid Vegetable Type Fatty Acids, Emery 640 Distilled Palm Type and Emery 621 Distilled Coconut Type Fatty Acids are some of the products on which information is available.

Metrogram Balance

Arthur S. La Pine & Company, 121 W. Hubbard St., Chicago 10, have issued a bulletin on their Metrogram Balance, an instrument with capacities to 50 kilos or 110 pounds, and with sensitivities from plus or minus 10 millligrams. It is said to weight accuratey in out of level positions.

Lanolin Product Booklet

American Cholesterol Products, Inc., Milltown, N. J., have issued a bulletin on a new product called Modulan which is described as a chemically treated lanolin containing all of the constituents of lanolin modified by a unique treatment so that entirely new and valuable properties are introduced.

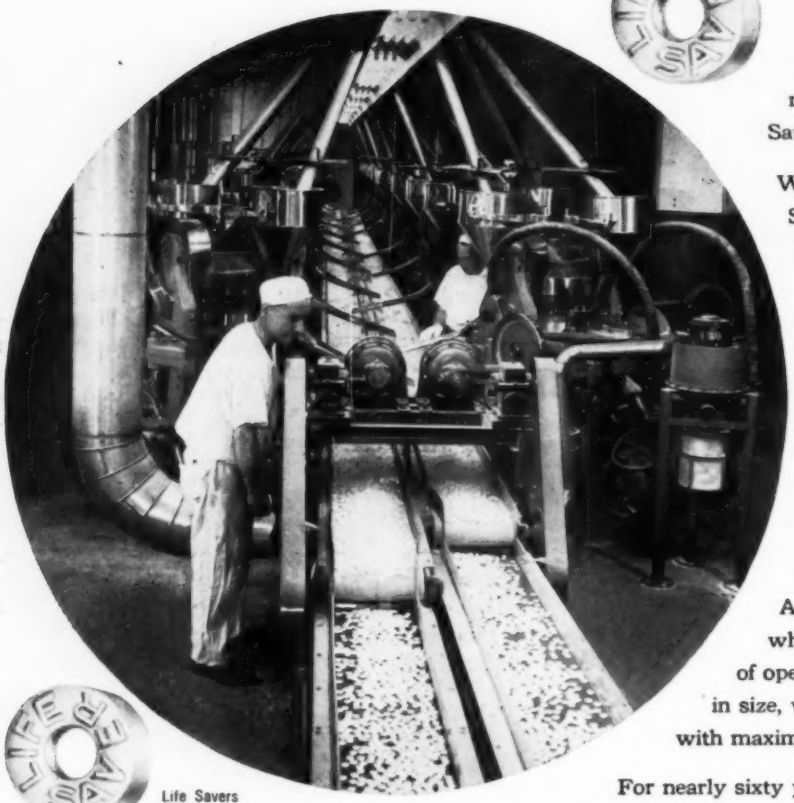
American Cyanamid Book

The third edition of Products and Services of American Cyanamid Company for Industry and Agriculture is available from the company at 30 Rockefeller Plaza, New York 20. This illustrated book contains a convenient listing and description of the products that American Cyanamid offers. It also outlines the divisional structure through which such products are sold.

Plaxpak Brochure

A new 8-page brochure describing the squeezable Plaxpak polyethylene bottle has been issued by Plax Corp., West Hartford, Conn. Illustrated with typical products packaged in squeeze bottles, the booklet covers the functional characteristics and design considerations of this type of container. Typical uses—including those for industrial and laboratory, medical, household and utility, and cosmetics applications—are listed. Data on closures and accessories and printing and labeling techniques are also given.

Stokes Presses Make Life Savers



Life Savers mints move down conveyor lines at the Port Chester plant after being formed on Stokes tabletting presses.

Life Savers, "the candy with the hole", are made on Stokes rotary tabletting presses at the Life Savers plant in Port Chester, N.Y.

White pressed mints made on Stokes presses by Life Savers include Pep-O-mint, Wint-O-green, Spear-O-mint and Clove.

Each of twenty Stokes Model DD-2 presses turns out these Life Savers at a rate of over 1,000 a minute... substantial economies in labor and production have been realized by Life Savers Corporation since their first Stokes presses were installed in 1946.

All Stokes tabletting presses, whatever the size of tablet or speed of operation, produce tablets perfect in size, weight, density and finish with maximum efficiency and little labor.

For nearly sixty years Stokes machines have been used by leaders in the pharmaceutical industry. Stokes Advisory Service is available, at no obligation, to all manufacturers interested in proved techniques for practical and profitable manufacture.

Send for the new Stokes Catalog No. 800 which pictures and describes the complete line of Stokes tabletting presses.

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STOKES MAKES
Plastics Molding Presses,
Industrial Tabletting
and Powder Metal Presses,
Pharmaceutical Equipment,
Vacuum Processing Equipment,
High Vacuum Pumps and Gages,
Special Machinery

F. J. STOKES MACHINE COMPANY, 5532 TABOR ROAD, PHILADELPHIA 20, PA.

Management Forum

by Francis Chilson

INDUSTRIAL CONSULTANT

The Wages of Sin

Some sins are worse than death as is attested by the destinies of a group of predatory financiers, who had a meeting in Chicago in the year 1923. These were all men of the old school, who had been reared in the belief that "the public be damned". They had no interests other than to make money in limitless quantities regardless of how it was acquired.

One of these men was president of a major steel company. One was president of the Bank of International Settlements. One was a cabinet member. One was president of the largest utility company in the world. One was president of the largest gas company. Another was president of the New York Stock Exchange. One was a Wall Street speculator. Still another was an international monopolist. The last man was one of the greatest grain speculators in the world.

Quite a group! What they severally accomplished in accumulating vast power and wealth, could not now be achieved, thanks to S.E.C. and other regulatory laws.

Twenty-odd years later the moving finger of fate which none of them had the perception to see that day in Chicago, had written their destinies thus:

The president of the steel company, Charles M. Schwab, died bankrupt, after having lived for several years on borrowed money. The president of The Bank for International Settlements, Leon Fraser, died a suicide. The cabinet member, Albert Fall, died at home after serving a jail term. The president of the utility company, Sam Insull, died virtually broke and was a fugitive from justice. The gas company president, Howard Hopson, died in an insane asylum. The president of the New York Stock Exchange, Richard Whitney, is now living in retirement after having served a jail term for "misappropriation of funds." The Wall Street speculator, Jesse Livermore, died a suicide. The international monopolist, Ivar Kruegar, died a suicide. The grain speculator, Arthur Cutten, died in Europe, broke.

In passing it may be observed that the bankers of that time not only poured other people's money into the hands of this group of men but they also thought they were all honest men!

The Philosophy of Pricing

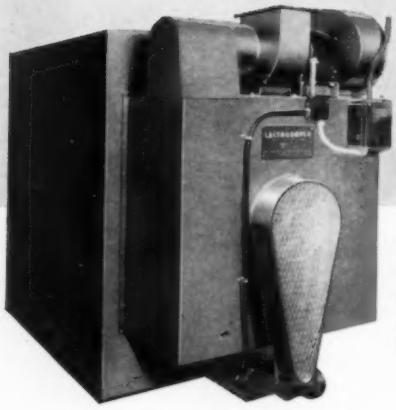
I have talked with many people in the trade about the philosophy of pricing and I find there is none. Some firms charge all the traffic will bear, especially for new, unique specialty items. Hence, you find some items that are priced 12 or 15 times cost of sale. (This is to say, the total of manufacturing labor, overhead and materials.) Manufacturers justify high prices on the ground that research is costly, that it is a gamble at best, and since obsolescence can be exceedingly rapid in the specialty field, it is justifiable to make the product earn as much as it possibly can while it still is in demand.

Such an attitude overlooks two important facts: The first is, that since research expenses still are deductible from income taxes, the expense of developing an item can be substantially recovered through tax deductions before it is introduced; the second is, that the burden of expense falls most heavily upon those least able to pay, for it is the mass of the lower income people who support the drug industry and not the relatively few people who are in the higher income brackets. It is my belief, therefore, that such a pricing policy provides one of the most potent arguments for socialized medicine. And *it has been used* along with the earnings statements of many of the ethical drug manufacturers. It seems to me that some firms are so shortsighted that they are slowly killing the goose that laid the golden egg. In my humble opinion, many specialty prices are much too high.

Unfortunately many doctors like to ride the gravy train themselves. Consider the scandalous expose in New York City, where some doctors and pharmacists have been splitting the take on prescription items. There is nothing new about that. It was done forty years ago, when, as a kid I worked in a drug store. And the practice is by no means confined to New York

Put your storage tanks on a DRY air diet with Lectrobreathers*

The moist air they're inhaling wastes money and destroys quality



A tank breathes freely, as air passes through the charge of Activated Alumina and is dried DRY. When a Lectrobreather needs reactivation, it is lifted off and a spare takes its place.

Where volumes of air passing in and out of a storage tank are sufficient, a Lectrodryer* is used. Since its DRYing-reactivating cycle can be reversed as required, it stays right on the job.

A processor was buying certain liquids in drums, *at premium prices*, because the moisture in the air the storage tanks inhaled injured their quality. Then he discovered Lectrobreathers, which feed only DRY air to the tanks. Now he buys in tank-car lots, saving on raw materials, saving on handling and holding quality constant.

An oil company safeguards its fine lubricating oils against contamination by water from the time it is refined until it is safely packaged. They hold a blanket of DRY air over the oil by forcing the tanks to breathe through Lectrodryers that remove every trace of moisture from the air.

Lectrobreathers and Lectrodryers will make certain that any tank, little or big, breathes only DRY air. Which to use is determined by the size of the DRYing task: A Lectrobreather has a color indicator which tells when it should be reactivated. Operation of a Lectrodryer can be made fully automatic.

For help in selecting and applying the DRYing equipment you need, tell your problem to Pittsburgh Lectrodryer Corporation, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Glebe, Sydney.
In France: Stein et Roubaix, 24 Rue Erlanger, Paris XVI.
In Belgium: S. A. Belge Stein et Roubaix, 320 Rue du Moulin, Bressoux-Liege.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

LECTRODRYER

*REGISTERED TRADEMARK U.S. PAT. OFF.

City. Very high-priced prescription items make the practice more inviting to those who, regardless of ethics, love the almighty dollar too much.

The Absurdity of Chronological Costing

I think the whole basis of cost accounting, both for tax purposes and for pricing is an absurdity. It is absurd not to load costs with extra overhead during times of high business activity.

I have before written about distributing fixed overhead expenses such as depreciation, insurances, taxes, etc., on the "sales curve basis," instead of doing it at a flat rate regardless of the extent to which facilities are used.

It is logical and accurate to say that facilities are used and *used up* at a more rapid rate during periods of high business activity than in a period of low activity. After all, you have these facilities for the purpose of carrying on business activity and each dollar of business done should bear its proportionate share of all fixed as well as the semi-fixed expenses mentioned hereafter. But actually each dollar *doesn't* consistently bear its share of the cost of doing business. In times of low business activity the proportion of fixed and semi-fixed charges in each sales dollar goes up, and in times of high activity the proportion goes down. This, I say, is an accounting absurdity.

The "semi-fixed" expenses referred to above are charged off as they are incurred, and include administration expenses, sales expense, advertising and research. In my opinion, such expenses should be regarded as "semi-fixed" and provided for from reserves on the sales curve basis. Thus, in a time of high business activity, reserves should be built up so that in a time of low business activity, these vitally important activities need not be curtailed. All such expenses should be provided for on an income-expense ratio basis.

Under the present absurd accounting system the operator of a business invariably is forced, during a period of low business activity, to curtail or even eliminate *the very activities that are needed to pull the business out of the doldrums.* He slashes advertising and other marketing activities. He slashes research or cuts it out altogether—usually with disastrous results. If the reversal is severe enough he may even be forced to cut administrative salaries or even eliminate some good executives entirely. It takes good executive brains to run a business and good brains are damned hard to find when they are most sorely needed. *Actually, they are needed more in a time of stringency than at any other time.*

In my opinion, to add to unemployment during a time of low business activity is a hell of a way to preserve a given business or to insure that it will be successful once again. It's a hell of a way to preserve the free enterprise system. But present tax methods and accounting procedures give the business operator no alternative. He has stockholders breathing down his neck for dividends. He can't pay dividends unless he has profits. He can't have profits if his operating expenses do not bear the proper relation to his business income. So he has to cut. The income-expense ratio must be stabilized on a uniform basis.

Thus, if fixed and major operating expenses (that is, semi-fixed) were charged out on a sales curve basis, all such expenses would always bear the proper relation to business income.

The absurdity of present accounting methods creates the condition that during periods of high sales activity Uncle Sam gets a damned sight more tax money than he is entitled to, and the stockholders get a damned sight more dividends than they are entitled to.

Uncle Sam could be brought into line by actually rebelling against the present method of tax computation. If the American Association of Manufacturers had the guts to do it, they could organize a tax rebellion.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Variable Speed Vial Filling Machine

Up to 1200 4-ounce vials per hour can be filled with the new Filamatic Model AB 4 Automatic Pipette and Vial Filling Machine recently announced by the National Instrument Company, Baltimore, Maryland. Smaller volumes can be dispensed at speeds up to 90 per minute.

The Filamatic is designed for rapid, foam-free delivery of liquids into vials, ampoules and small containers including sprinkler neck bottles. It will dispense anti-biotics, aqueous solutions, oils, alcohols and pharmaceutical preparations of all types at speeds adjustable from 6 to 90 fills per minute. An adjustment is provided to eliminate foaming, even with low vapor pressure liquids such as acetone, benzene, alcohol, etc. Delivery volume can be varied from a single drop to 4 ounces per stroke by means of a graduated micrometer mechanism. Any desired volume can be duplicated by simply setting the micrometer reading to the desired volume.

The Filamatic fills directly from any drum or container. It is completely portable and hence may be operated wherever a source of current is available. An electric counter indicates the total number of fills.

An electronic control provides a wide range of operating speeds instantly adjustable from 6 to 90 fills per minute. Average accuracy of fill up to 1/10 of 1 per cent, regardless of variations in bottle size.

The entire filling mechanism may be removed for cleaning or sterilizing by simply loosening two knurled thumbscrews. The filling unit is fabricated of type 18-8 stainless steel for maximum corrosion resistance.

The Filamatic occupies 8 x 11 inches of bench space and weighs 30 pounds.

Ask for bulletin DCI.

Tablet coating

BY RONALD CLARKSON—TABLET CONSULTANT

At Last—A practical, authoritative textbook on Tablet Coating!

This is the answer to a world-wide request for a down-to-earth book on this highly specialized technique.

The author, Ronald Clarkson, an outstanding tablet consultant, is well known in this country and abroad for his contribution to technical literature on Tablet Manufacturing. Co-author of the text book *Manufacture of Compressed Tablets*, he has also presented papers on various phases of tablet manufacturing before the APMA production meetings.

Since entering the consulting field he has been a contributor to *Drug and Cosmetic Industry*.

In his capacity as a consultant the author has been supplying coating instructions to his clients in various parts of the world at a substantial fee. This confidential copyrighted treatise was entitled *The Fundamental Procedure for Coating Tablets* and forms the basis for this text.

The original treatise has been greatly expanded and here it is at a fraction of the original price!

A Valuable Aid to Everyone interested in coating tablets

- Production Managers
- Sales Managers
- Coaters (experienced and inexperienced)
- Development and Research Men
- Beginners
- Students

A Technical Book filled with Formulas for

- Subcoating Syrups
- Dusting Powders
- Colored Syrups
- Polishing Solutions
- Protective Coatings
- Coatings for Tropical Climates
- Enteric Coatings

In addition to the valuable formulas, complete directions for their preparation are given—even to such minute details as the temperatures at which they should be used.

Detailed instructions on how to reclaim spoiled tablets are outlined.

An entire chapter is devoted to installing a coating department—recommendations being given regarding the proper size and type of equipment, operating capacities, dust control and hot air systems—also how to lay out a complete coating department including blueprint floor plan.

All extraneous matter has been omitted. This book deals 100% with the details of actual coating—how to do it and produce satisfactory results.

Here is the first book of its kind ever published. Complete, simple, and easy to follow instructions on what to do and what *not* to do. It will prove invaluable to you as an instructive text, and as a ready reference.

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Ready For Immediate Shipment

Hammer Mill

The introduction of the new larger sizes Model C and D Pulva-Sizers rounds out the complete line of pulverizing mills as manufactured by the Pulva Corporation. They now offer five sizes from the Pulvette with ¾" H.P. motor to the largest Model D Pulva-Sizer which uses up to 100 H.P. motor. And each size machine is available in various types to meet all pulverizing requirements.

All sizes of Pulva-Sizers are precision built, impact mills of the swing hammer type employing high speeds and close clearances for ultra fine grinding. Thru the use of knife type hammers and low speeds with controlled clearances, the Pulva-Sizers are ideal for many granulating operations. Efficient on both dry grinding and wet milling these machines are readily adaptable for most any type of comminuting operations.

In the two new Model C and D units, a number of new and exclusive improvements have been incorporated in the design such as twin feed screws in sizes from 1¾" to 4" Dia. to handle a wide range of feed sizes and types. The same feed drive gear mechanism is used for all sizes of feed screws.

The drop forged hammers of the stirrup type are built up on the wearing edge with various types of hard surfacing alloys including the new Pulvalloy surfacing which outlasts other alloys by 3 and 4 times on most operations.

The Models C and D Pulva-Sizers have quick opening hinged covers for complete access to the grinding chamber for inspection or cleaning. In designing these machines, emphasis was placed on ease of handling and servicing together with smooth running and continuity of service. They are built for 24 hours per day, 7 days per week operation.

Literature on these larger sizes of Pulva-Sizers is available for distribution, Pulva Corporation, 572 High Street, Perth Amboy, N. J.

High Speed Packer

The new, improved "WHIZ-PACKER" Automatic Rotary Filler and Conveyor Combination was especially designed by Frazier & Son, 338 Cortlandt Street, Belleville 9, N. J. for handling granular and powdered materials where vibration for a tight pack and elimination of dust are required. Each model is custom built and assures positive fill without spillage.

It is a high speed packer for flat bottom, wide or narrow mouth containers in a broad range of sizes and shapes. Suitable vibration is furnished in the rotary filler section to permit products to fully settle and to provide fill at maximum speed up to 120 per minute. At the same time, dust accumulation is controlled by the seating relation of the container adapter spouts to the container openings. The adapter relation to the rotary feeding head allows a group of containers to be filled and vibrated at the same time, before moving to the outgoing side of the conveyor.

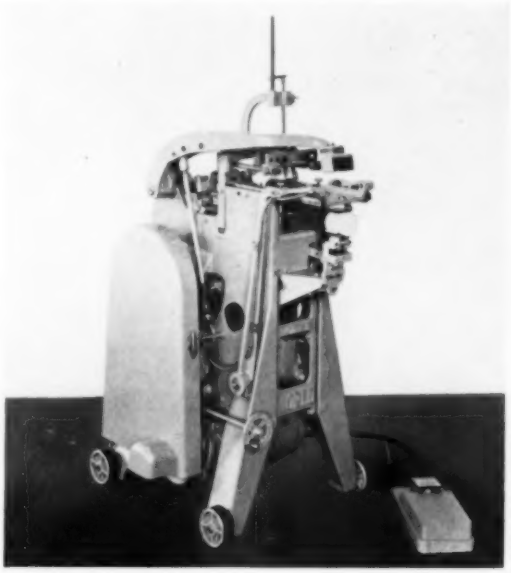
All machines are equipped with scientifically designed agitation in the hopper, appropriate to the product; automatic self alignment of product dial plates and container dial plates for maximum efficiency; no can no fill device; FRA-SURE Variable Speed Control and CUPTROL (for small weight adjustments while the machine is in operation.

The machine is best suited for a one container size or possibly a two container size set-up where production requirements are great.

New Semi-Auto Labeler

A new and extra versatile labeling machine, known as the "World" Model B Semi-Automatic Labeler, is being introduced by Economic Machinery Company, Worcester, Mass., Division of Geo. J. Meyer Manufacturing Co.

The Model B Semi-Automatic Labeler features precision registration of labels from postage stamp size up



to as large as 4½ "by 6", at speeds up to 60 containers per minute. It is equipped with variable speed control.

Unusual simplicity of design, sturdiness and ease of operation are claimed for this new Labeler. A multiple cam supplies the motion for all moving parts. Simple attachments permit rapid changeover to various sizes of labels and containers. The operator feeds the container to the Labeler and presses the electric control foot treadle. The labels are automatically picked up by an adhesive coated picker and transferred to the container by vacuum. A pressure wiper fastens the label firmly to the container. Then it is ready for removal and replacement by the operator.

Further information on this simple, compact, precision labeling unit may be obtained by writing the manufacturer.

Trombone Thermometer

Scientific Glass Apparatus Co. Inc., Bloomfield, New Jersey, has just announced the development of a new adjustable stem thermometer called "Adjustatherm"

which is made in two different stem lengths—6½" and 11½". (For flasks ranging from 250 to 22,000 ml.) Both sizes are available in three ranges: 0° to 150° C., 0° to 250° C., and 0° to 360° C.

It is claimed that a set of two "Adjustatherms" will replace up to nine conventional type thermometers. It is further claimed that in addition to taking the liquid temperature, you may also obtain the vapor temperature without dismantling the equipment. You simply lift up the thermometer.

The "Adjustatherm", which works like a brombone, consists of a thermometer having either an etched scale with clearly defined markings against a yellow background, or a milk-glass scale. The thermometer fits into a precision bore sleeve (or adapter) with either a standard taper or semi-ball joint.

For complete information, including prices, write to the Scientific Glass Apparatus Co. Inc., Bloomfield, N. J.

Wriggle Belt Conveyors

Adaptations of standard conveyor systems are solving daily many unusual material handling problems. When loads must be carried around building obstructions and kept horizontal while traveling up and down inclines, an inversion of the overhead, trolley-type conveyor will do the trick.

All sorts of commodities—sheets of printed material, open containers of chemicals, open boxes of

small machine parts, containers of in-process food stuffs, etc.—can be transported from final production to packing and shipping areas without the danger of shifting (in the case of stacked loads) or spilling (in the case of boxes of small particles) on this type conveyor.

The installation shown is one at the Crowell-Collier Publishing Company, Springfield, Ohio, where trimmer lifts of magazines are wormed around building obstructions and carried to this plant's packing and shipping departments. This conveyor also transports loads up and down sharp inclines without the magazines shifting, thus eliminating the necessity of rejogging before reverse stacking.

In operation, trimmer lifts arrive at the shipping department on this special inverted conveyor, are picked up by shipping-room personnel, and reverse stacked on a "Carousel-type" conveyor in uniform loads for packing. As a result, Crowell-Collier's packing and shipping operations are speeded and manual handling is kept to a minimum.

Dryer

A large capacity drying oven for fast, economical, accurately-controlled drying of various pharmaceuticals including granulations, effervescent salts, etc., is offered by Arthur Colton Company, Division of Snyder Tool & Engineering Company, Detroit.

The new oven, designated Model T-4030-E, Truck Type, is engineered specifically to accommodate tiers of trays on truck units which are wheeled directly into the oven for drying, thus permitting large batches of materials to be processed quickly with minimum handling.

Outstanding characteristics of the unit are new design, new construction, fine appearance, new engineering expressed in such features as double insulated walls, 50 per cent higher drying efficiency than comparable driers, first cost and operating cost reduced to the point where the entire original investment may be recovered in savings accomplished during a few months of use. Engineering has also stressed safety in operation, completely accessible controls, and quick, easy installation.

Walls, roof and floor are two sturdy steel shells mounted on an angle iron structure and filled with nine-pound density rock wool insulation two inches thick. Insulation is in block form and is non-settling. Each block is accurately fitted in position to prevent heat leakage. The panel joints are hand packed for complete insulating efficiency. All corners on the outer shell are rounded for good appearance, and all operating ducts, etc., are enclosed within the shells to maintain a trim and neat installation. Exterior finish is gray enamel; interior is sprayed, baked enamel, smooth, sanitary and easy to keep clean.

The door is a single, side-swing type with heavy, adjustable hinge straps and bevelled edges with asbestos seating gasket. Door catches are spring relief type which automatically release when internal pressure reached a certain point—an important safety measure to prevent explosions. Door may be located in either or both ends to suit available space, for convenience in handling trucks, or, in the case of a single end door, to minimize heat loss.

Fresh air is admitted through an adjustable intake near the floor, filtered, drawn to the heating chamber on top of the unit, and thence directed downward and horizontally across the trays by means of blowers which maintain uniform distribution and recirculation. An exhaust vent in the roof of the unit is equipped with an adjustable damper and extension rod to an indicating quadrant.

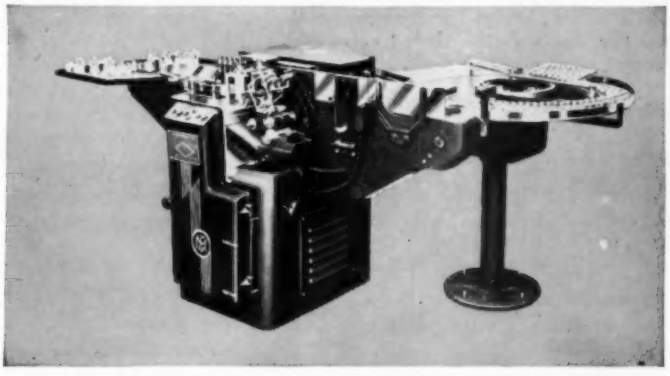
Electric ribbon heaters or strip heaters are available as standard equipment. An enclosed control panel contains magnetic contactor and fuses and control switch and fuses. The unit is completely wired for connection to electric lines. Indirect gas or steam heating can be supplied on order.

All-round achievement

THE "BANKS" LABELLER

of unique design and principle. A high speed fully automatic body labelling machine for cylindrical containers. Fitted with *"No Bottle—No Label"* device.

Precision labeling from 100 to 800 dozen per hour using one label stack only. The "Banks" Labeler is simple to operate, occupies very little space, and positions the labels positively, accurately and without any trace of surplus gum beyond the edges of the label, irrespective of the label shape or size. Change from one size of container to another is obtained in a matter of seconds. Cleaning down takes only a few minutes. Model BLMD will fix labels both sides. Model BLM 3 will fix the label all around bottle or jar.



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FOOD MACHINERY AND CHEMICAL CORPORATION

STOKES SMITH Co

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SIMPLEX PACKAGING MACHINERY, INC.
Oakland, California

New MIKRO AIR CONVEYING SYSTEM

Ventilates and Cools as it Carries Material to the MIKRO-COLLECTOR*

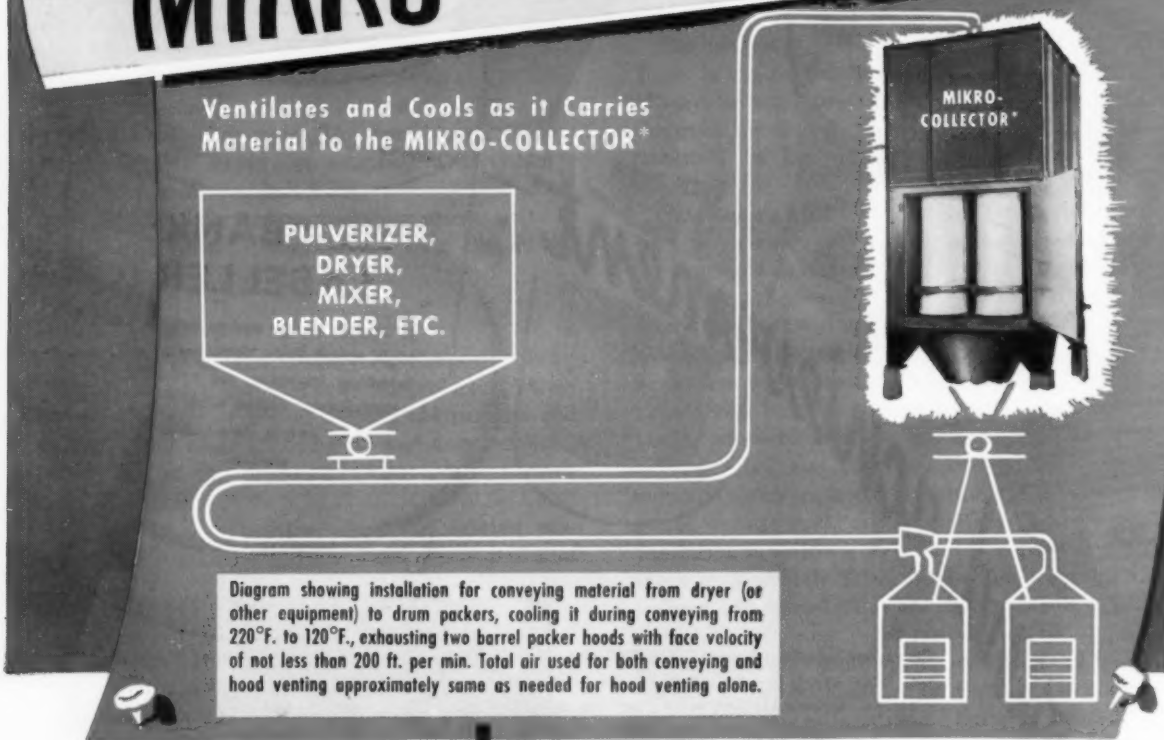

Diagram showing installation for conveying material from dryer (or other equipment) to drum packers, cooling it during conveying from 220°F. to 120°F., exhausting two barrel packer hoods with face velocity of not less than 200 ft. per min. Total air used for both conveying and hood venting approximately same as needed for hood venting alone.

- *Permits use of ventilated air from packaging hoods to be used for conveying material*
- *Reduces required size of dust collecting unit as much as 50%*
- *Conveys material from any dust source (dryer, pulverizer, blender, tank, vat, etc.)*
- *Cools the conveyed material without mechanical refrigeration*
- *Spans distances up to 200 feet*
- *Will by-pass any obstacle in the form of existing machinery or equipment*

These and other advantages make the MIKRO Air Conveying System an ideal low-pressure, low-cost method of conveying material from any dust source. Its complete flexibility helps solve plant layout problems without costly flow sheet revisions.

This dust-tight installation conveys up to 800 grains of dust per cubic foot of air . . . Makes possible the return of filtered air to processing area, thus reducing loss of heated or conditioned air . . . Assures freedom from infestation and metallic contamination . . . Easily cleaned . . . Eliminates booster fan, thus preventing change in particle sizing.

The MIKRO Air Conveying System is more economical to install, operate and maintain than a conventional mechanical system. Even greater saving is effected when stainless steel or nonferrous construction is required.

*Patents applied for by H. J. Hersey, Jr. and Pulverizing Machinery Company

SEND FOR new MIKRO AIR CONVEYOR Bulletin

PULVERIZING MACHINERY COMPANY
22 Chatham Road Summit, New Jersey

PRESERVE OUR HERITAGE: FAITH, FREEDOM AND INCENTIVE

MIKRO-COLLECTOR 100 PER CENT
Reg. U.S. Pat. Off.
By the makers of
MIKRO-PULVERIZERS and MIKRO-ATOMIZERS

1288

All controls are on the outside of the cabinet and are positioned for complete convenience and safety. Controls can be positioned in special locations to meet individual requirements.

Colton Drying Oven Model T-4030-E accommodates two trucks, each mounting twenty trays. Other standard models are No. 1018-E, Laboratory Model, for ten trays, and No. 2030, Production Model, for twenty trays.

Merrell Pressure Lab.

Completion of a new autoclave laboratory designed to prepare drugs for medical research, was recently announced by The Wm. S. Merrell Co. of Cincinnati, Ohio, manufacturers of ethical pharmaceuticals.

The new laboratory houses three autoclaves built especially to carry on superpressure organic chemical reactions that would otherwise be impossible to effect or too time consuming and costly to do other ways, he said.

Distinctive features of the new two-section unit minimize hazards frequently associated with such operations. Technicians work from behind a one-foot thick reinforced concrete wall, which separates the remote control and operations rooms. Through six-inch port holes fitted with one-inch thick safety glass, operators can see the autoclave equipment. Temperature indicators and pressure recorders, among other specialized electronic instruments, permit careful, accurate control of pressurized reactions at all times.

In the operations room are one large (10-gallon) and two small (three-fourths gallon and one pint) autoclaves—special steel-alloy tanks which are sealed before the high pressure, high temperature reaction is started.

The magnitude of superpressure reactions is dramatically illustrated when compared to the ordinary autoclave used for sterilization of surgical instruments and bandages. In hospital-type autoclave, steam under low pressure (15 pounds per square inch) and a temperature of 121 degrees C., or 217 degrees F., are adequate. In contrast, Merrell's large autoclave is designed to withstand operating pressures up to 5,000 pounds per square inch, and temperatures as high as 400 degrees C., or 752 degrees F.—enough heat to melt both tin and lead. The firm's two smaller autoclaves will stand pressures of 8,000 pounds per square inch, and a similar temperature range.

When an autoclave is functioning at such superpressures, obtained by gases developed in specific reactions or by the introduction of hydrogen into the reaction chambers, a movable wall at one end of the operations room is opened. This opening serves as the principal "safety valve" in the event of a pressure "blow-off." Window panes are etched to break easily, thus preventing possible injury to passersby from flying glass. Plant regulations forbid an operator inside the operations room during an experiment.

Other safety features include a special cement floor in the operations room, and explosion-proof electronic equipment and control fixtures throughout the building, to reduce the possibility of fires or explosions caused by static electricity.

Agitator

A new Flask Agitator, designed for use both in production work and in the laboratory, is offered by the B. F. Gump Co., 1325 South Cicero Avenue, Chicago 50, Illinois.

The unit is recommended for agitation and aeration in antibiotic fermentations or any laboratory usage where flasks or jars must be agitated—such as for putting solids into liquid suspension in factory control samples.

The Agitator drive is an entirely new development for this type of machine. It is a self-contained unit, that eliminates the need of any rods or other flexible supports for the platform. The drive is so designed that rotary movement in a true horizontal plane is assured. It cannot get out of alignment, and imparts a positive rotary motion in a true circle over the entire platform, regardless of whether the platform is evenly loaded or not.

Flasks are held tightly in place on the platform. Various types of holders can be furnished, for any size flask or glass jar. The smooth rotary motion of the unit provides excellent aeration and agitation. Products being agitated are in full view and can be watched through the process. Platforms of up to 10 sq. ft. area are available.

The platform is covered with metal, rubber or composition board and is supported by an aluminum casting. The base is made of cast iron and steel throughout, using anti-friction roller bearings which run in a bath of oil. The unit can be equipped with any fixed speed drive or with a variable speed drive for easy adjustment to any speed up to maximum. It is available with or without the support table.

Inquiries regarding special requirements will be welcomed by the B. F. Gump Co.

Propylene Glycol

Can live with alcohol or leave it alone!

Whether the cosmetic lotion you prepare is non-alcoholic, mildly alcoholic or even strongly alcoholic, propylene glycol, U.S.P., will combine effectively and provide a soothing and softening effect without residual stickiness. Propylene Glycol is used as a carrier, humectant and preservative in many types of cosmetics—yielding a superior product while often replacing a more expensive ingredient. It may well do the same for you. Write for more complete information and facts from Dow, Dept. OC19.

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Advancing Therapy

Sulfa-Urea Powder for Impetigo

R. B. Rees, E. M. Hamlin and J. P. McGinley (*California Med.* 76:344, 1952) have found that sulfonamides can be used in the treatment of impetigo with vastly increased safety and with more effectiveness in powder rather than ointment form when combined with urea powder in a ratio of approximately three parts of sulfonamide to one of urea. These dermatologists have used 70 per cent sulfathiazole and 30 per cent urea powder routinely in treatment for impetigo since 1943. Patients known to be sensitive to sulfonamides were not treated with this preparation. As sulfathiazole has been deleted from New and Non-Official Remedies, sulfadiazine may be used instead. The former, in combination with urea, is a coarse grainy white powder; the latter mixture is finer.

Of 701 patients treated with such a mixture, 95.6 per cent were cured within a week. The only complication was local dermatitis which occurred in 0.57 per cent of patients. This compares favorably with results obtained with newer and expensive drugs which usually have the disadvantage of being used in a greasy vehicle. The low incidence of sensititivity reaction to the sulfonamide-urea powder is perhaps ascribable in part to the avoidance of a greasy vehicle.

Hyaluronidase for Keloids

The use of hyaluronidase for the treatment of keloids was described by T. Cornbleet at the Chicago meeting of the American Medical Association (through *Science News Letter* 61:397, 1952). Keloids are an abnormal growth of connective tissue. They often appear in scars from wounds and burns. Many atomic bomb victims of Hiroshima and Nagasaki developed keloids. X-ray treatments, freezing with liquid nitrogen, and surgical removal followed by X-ray treatment are methods that have been used in the past to treat these stubborn growths. In the new, successful treatment the enzyme, hyaluronidase, was injected into the keloids. Cornbleet gave this treatment to 11 patients, nine of whom had old, hard keloids that had been present for several years. Two of the patients had many pea- and bean-sized keloids from previous acne. Two had the ordinary crab-like type across the chest. The rest had bulky keloids on their bellies, mostly the result of surgical operations.

The treatment was successful in all cases. Pain, tenderness and itching gradually waned and disappeared. The keloids softened and shrank to three-fourths or one-half their original height above the skin. The remaining excessive tissue wrinkled and was then cut away. None of the keloids returned after this treatment. Hyaluronidase was successful, Cornbleet believes, because of its ability to soften the glue-like mass that holds cells together in body tissues.

Feeding the Critically Ill Patient

A preliminary report on a new regimen in feeding the critically ill has been presented by J. Elliot and his colleagues (*Arch. Surg.* 64:278, 1952). Based on a four-year study of the nutritional management of the critically ill patient, the new regimen makes use of the newer knowledge of amino acid utilization for protein metabolism. On this regimen amino acids and other nutrients in balanced solution are administered continuously at a constant rate through a small tube inserted into the gastrointestinal tract. The typical feeding formulas contain protein, carbohydrate, calcium, potassium, phosphorus, magnesium, sodium chloride, sodium lactate, and ethyl alcohol in measured amounts. The nutrient solutions are prepared in a sterile and stable form. They can be stored at ordinary temperatures for long periods without deterioration. In a group of 254 patients between the ages of seven months and 94 years who were fed by this regimen, the average duration of feeding was 15 days. The adult patients received an average of 2,500 cc. of formula daily containing from 125 to 200 Gm. of protein and providing approximately 2,000 calories. One patient fed continuously for 214 days had a true weight gain of 32 pounds (14.5 kg.). Continuous drip feeding of partially hydrolized solutions appeared to meet the demands of continuous protein metabolism. This method of nutritional management has unusually broad applications, especially when prolonged feeding is required for institutional and home care of the critically ill.

Diethylstilbestrol Suppresse Lactation

In the *Medical Times* (80:151, 1952) V. P. Mazzola and N. J. Mazzola report the successful use of diethylstilbestrol for the suppression of lactation in 90 per cent of a total of 1,591 cases treated over a period of two years, seven months. About two-thirds of the cases were primiparas. In a control series of 431 cases diethylstilbestrol was not used. In the treated cases diethylstilbestrol was given in the form of a 25-mg. tablet four times a day for four to five days. In 10 per cent of the cases it was necessary to repeat the treatment on the sixth, seventh and eight postpartum days. Bleeding occurred in 6 to 7 per cent of the treated cases on the twentieth to twenty-fourth day after parturition. It was controlled by absolute bed rest and use of ice bags. In about half these cases bleeding recurred a week later but ceased by the twenty-fifth day postpartum. No breast abscess or morbidity due to suppression of lactation was noted in those treated with diethylstilbestrol. A highly micronized form of U. S. P. diethylstilbestrol was used. No toxic effects were encountered.

Protamide for Herpes Zoster

Protamide, a denatured, proteolytic enzyme obtained from the mucosal layer of hog stomach, was used by F. C. Combes and O. Canizares (*New York State J. Med.* 52:706, 1952) in the treatment of 30 men and 20 women with active herpes zoster. Protamide was administered intramuscularly as a sterile, colloidal solution, the intervals between injections varying from six hours to two or three days. This routine was determined largely by the degree of clinical

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These forms are of unsurpassed whiteness. Evaluation by your own control chemists may reveal much of interest. Your inquiries are cordially invited.

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Ascorbic Acid Merck U. S. P.

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Triturations of Crystalline Vitamin B_{12}
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response and relief of pain. The total doses varied from 1.3 to 24 cc. Results were excellent in 29 of the 50 patients treated, satisfactory in 11, and unsatisfactory in the remaining 10. Improvement in the patients with favorable responses was almost immediate. The average number of injections required in the group with excellent results was 3.4, and in the group with satisfactory results 5.9. The disease was unusually severe in almost all of the patients with unsatisfactory results, but in some of them brief periods of relief from pain followed each injection and occasionally persisted for several hours. There were no complications, untoward reactions, sensitizations, or evidence of acute or chronic toxicity. It is significant that no patient who made an excellent or satisfactory recovery after Protamide suffered from post herpetic neuralgia.

Bacitracin in Surgical Infections

One hundred and sixty more cases treated systemically with bacitracin by intramuscular injection, with or without supplementary local administration at the site of infection, have been studied and the data have been analyzed by F. L. Meleney, B. A. Johnson and P. Teng (*Surg. Gynec. & Obstet.* 94:101, 1952). One hundred and thirty-one of the whole series were established infections. In the other 29 cases bacitracin was used prophylactically when infection was anticipated. About three-fourths of the cases of infection had failed to respond to other antibiotic treatment when bacitracin was called for. All but 3 of 97 cases had had penicillin either alone or with another antibiotic. The over-all results of therapy were favorable in 78 per cent of the cases. In those which had had no previous treatment the results were favorable in 91 per cent. In those previously treated unsuccessfully with penicillin and/or other agents, favorable results were obtained in 72 per cent. Evidences of kidney toxicity were absent or mild in 68 per cent of the cases, moderate and transient in 30 per cent, and disturbing in only 2 per cent. Symptoms and signs of toxicity usually subsided with continued treatment and almost invariably disappeared as soon as treatment was discontinued.

Therefore, in the opinion of Meleney and his colleagues, it has been demonstrated that bacitracin is an effective drug without serious toxicity, if material is used for systemic administration which meets a specification of LD_{50} of 500 units for a 20 gram mouse and if the dose is kept below 100,000 units a day. Satisfactory control of infection can often be obtained by half that amount. In neurosurgical infections bacitracin may often be the treatment of choice for both local and systemic administration.

Liver Fraction and Child Growth

In the course of work on dietary reproductive factors in the rat, says J. Yudkin (*Brit. Med. J.* 1:1388, 1952) it was found that supplements of liver caused a small but significant improvement in growth even when the animals were fed an apparently complete stock diet consisting of non-purified foods. The effect was produced both by fresh mammalian liver and by a specially prepared liver powder. Other liver powders did not produce this promotion of growth. It was decided to test whether a similar effect on growth could be produced in children. In this work, a powdered preparation of liver was given to apparently normal children of two years of age, at the average rate of 1.2 Gm. a day. After 13 weeks the 32 children taking this supplement gained on average about ¼ inch (0.6 cm.) more in height and 10 ounces (285 Gm.) more in weight than the 28 control children. These gains were roughtly 20 per cent and 40 per cent more than those of the control children. Yudkin believes that vitamin B_{12} is not the dietary factor responsible for this improved growth and he gives reasons for this belief.

Probenecid in Gout

The therapeutic potentialities of probenecid ("Benemia", Sharp & Dohme, Inc.) in the treatment of recurrent gout and chronic gouty arthritis were studied in 20 patients by L. R. Pascale, A. Dubin and W. S. Hoffman (*J. A. M. A.* 149:1188, 1952). Ten were followed for periods of five to seven and a half months. With a dose of 2 Gm. daily, serum uric acid fell within 72 hours to an average of 55 per cent of the control level. This was associated with an initial increase in urate excretion of 35 per cent to 200 per cent. Urate clearances remained increased two to four-fold with continued probenecid administration. In three patients with decreased renal function, probenecid therapy produced no fall in the serum uric acid level. When acetylsalicylic acid was given simultaneously with probenecid, the action of the latter in lowering the serum uric acid level was completely annulled but was restored when acetylsalicylic acid therapy was discontinued.

Probenecid therapy proved of greatest benefit in chronic gouty arthritis. Joint movement improved progressively in all patients; pain and swelling subsided. Acute attacks of gout developed in some patients soon after treatment was started, but their incidence diminished with continued therapy. No significant or consistent changes occurred in the serum electrolyte concentrations during prolonged therapy. No abnormalities in blood cell distribution were found. Results of hepatic and renal function tests remained normal. In one patient mild hematuria occurred from urate crystals during the first stage of treatment.

Ilotycin—New Antibiotic

In a report in *Antibiotics & Chemotherapy* (2:281, 1952) J. M. McGuire and his associates of the Lilly Research Laboratories state that, from a soil sample collected in the Philippine Archipelago, they have isolated an actinomycete belonging to the genus *Streptomyces*. From this organism they obtained a crystalline antibiotic which has been given the trade name "Ilotycin"; the generic name being erythromycin. They have found that Ilotycin is an antibiotic of very low toxicity that is active against gram-positive and gram-negative bacteria, mycobacteria, typhus, rickettsiae and certain large viruses. Ilotycin is a basic, crystalline compound with an empirical formula $C_{34-36}H_{60-68}NO_{11-14}$. Ilotycin administered by mouth has given encourging clinical results.

In line with this last statement is an editorial comment appearing in the same journal (p. 279). Here it is noted that the preliminary studies of erythromycin indicate that it may be an important contribution to the broad spectrum antibiotic field. It is apparent that this drug is highly active against organisms in the gram-positive group. It is less active against organisms of the gram-negative group, particularly the coliform organisms. The *Rickettsia* and some of the large viruses appear to be susceptible to the drug, but of considerable interest is its activity against the mycobacteria in relatively low concentrations. Already in some 30 patients the drug has been found to be highly effective in both pneumococcic and viral pneumonia. Its toxicity appears to be quite low and at this early date comparable in its side effects to those exhibited by the other three broad-spectrum antibiotic drugs.

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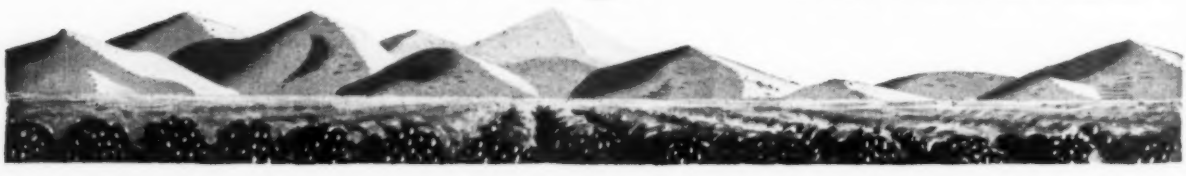


Compounder's Corner

Hair Dyes

In discussing modern hair dyes, F. Boess (*Seifen, Ole, Fette u. Wachse* 76:307, through *Perf. & Essent. Oil Rec.* 43:169, 1952) states that oxidation dyes are the only class of current practical importance. Laws controlling the composition of hair dyes vary quite considerably in different countries. Reference is made to the basic substances which are aromatic amines and aminophenols that yield brown, grey and black colors. Although many substances are used in hair dyes, Boess considers the following to be the most important: *para*-tolylenediamine, *meta*-tolylenediamine, picramic acid, *para*-amino phenol, *ortho*-amino phenol, *meta*-amino phenol, aminodiphenylamine, resorcin and its derivates, and diaminophenol.

Mordants are often needed. A simple method is to wash the hair with alkali and to treat it afterwards with a 6-10 per cent solution of hydrogen peroxide with a few drops of ammonia, a process which can be supported by application of heat. It is also pointed out that hair dyes are very sensitive to oxygen of the air and to oxidizing agents in general, and they must therefore be protected by reducing agents. The most important are sodium hyposulphite, which is marketed in Germany as anhydrous salt under various tradenames, and Rongalit C (sodium oxysulphonate formaldehyde).

In discussing the manufacture of hair dyes, Boess states that the ingredients are dissolved in water, alcohol or other solvents, as far as possible without the use of heat. This solution is poured into an 8 per cent soap solution at 60°C. and half of the required quantity of ammonia is added. Under constant stirring, cold soap solution is introduced until the desired consistency is reached. Finally, the remainder of the ammonia is added. The resulting preparation is strained through gauze and immediately poured into small bottles. As far as possible, manufacture and filling should be carried out in nitrogen atmosphere. Instead of soap solution, turkey red oil or other viscous alkaline substances can be used. Hair dyes based on water and alcohol are also on the market, but a viscous preparation is easier to apply.

The selection of colors is an intricate process, but the following table gives some idea of the shades obtainable by oxidation with 6 per cent solution of hydrogen peroxide in alkaline medium:

Dye	*Color obtained*
para-Aminophenol hydrochloride	hazelnut blond-brown
Picramic acid	red
meta-Tolylenediamine	yellowish red
Ursol brown	mahogany
Resorcin and derivatives	none
Nitro *ortho*-phenylenediamine	yellowish red-yellow
para-Tolylenediamine	dark brown—dark chestnut brown
Aminodiphenylamine	grey-dark grey brown
Diaminophenol	reddish brown-grey black
Ursol grey	grey brown
1, 2, 4 Diamino-anisol	brown
ortho-Nitranilin	canary yellow
meta-Nitranilin	light brown

The above shades are based on aqueous solutions of 1 per cent dye and are fairly permanent although not of the same intensity as if a mixture of dyes is used.

New Formula for Calamine Lotion

In the Practical Pharmacy Edition of the *Journal of the American Pharmaceutical Association* (13:250, 1952), S. W. Goldstein points out that the U. S. P. XIV Calamine Lotion is a valuable dermatological preparation. However, it has certain undesirable physical properties, and it is incompatible with phenol. To overcome these disadvantages, he offers the following new formula for calamine lotion for further study:

Calamine	**80.00 Gm.**
Zinc oxide	**80.00 Gm.**
Sodium carboxymethylcellulose—medium viscosity	**20.00 Gm.**
Dioctyl sodium sulfosuccinate	**0.65 Gm.**
Glycerine	**30.00 cc.**
Water	**960.00 cc.**

Dissolve the carboxymethylcellulose in 600 cc. of water with vigorous stirring, then with slower stirring add 285 cc. of water and then add the dioctyl sodium sulfosuccinate previously dissolved in 65 cc. of water. Rub the calamine and the zinc oxide to a smooth paste with the glycerine and about 40 cc. of the prepared suspension base, then add the remainder of the base in portions with trituration after each addition, or slowly with continuous trituration.

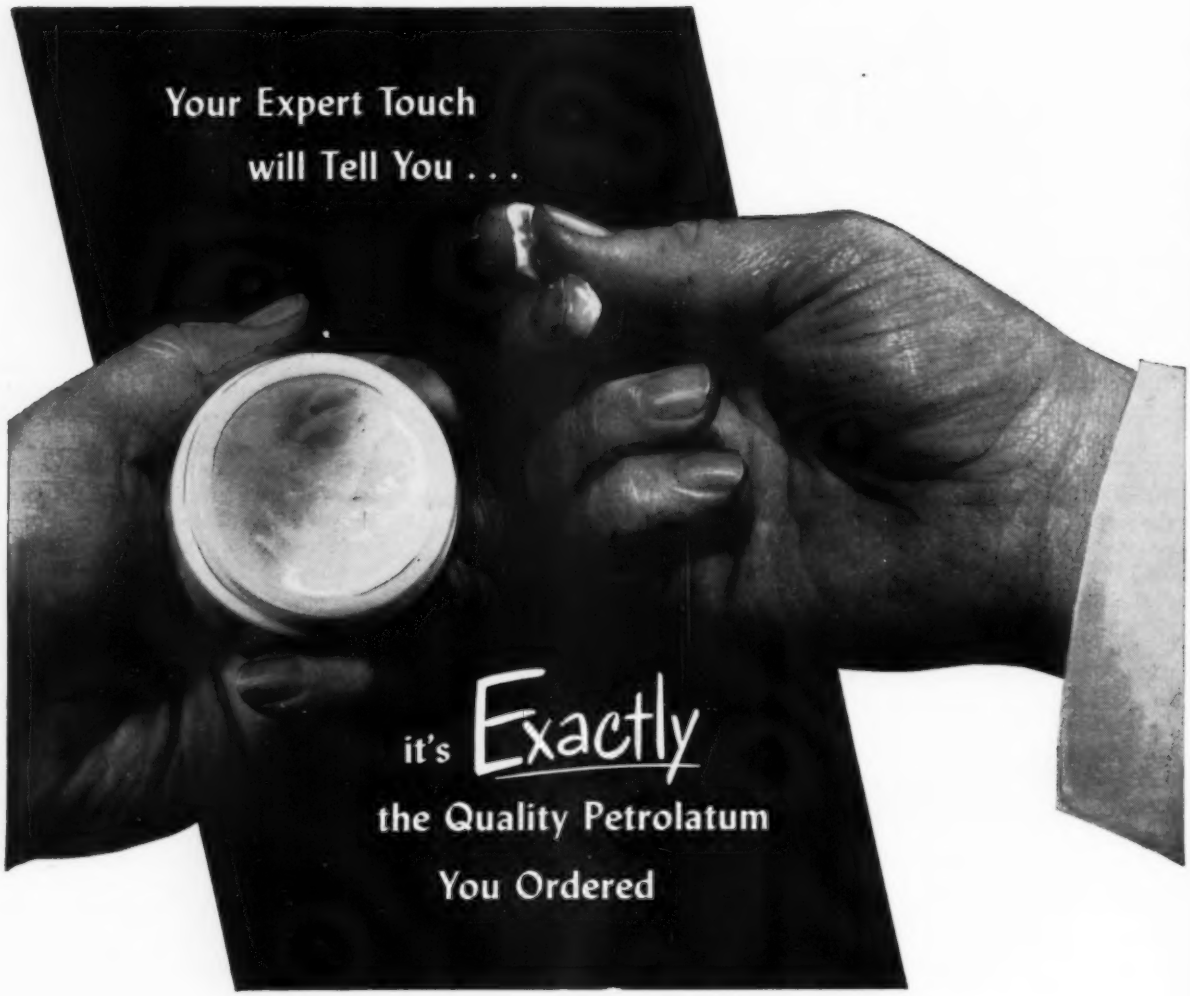
The lotion prepared with this formula does not settle readily and does not foam excessively on shaking; nor does it clog the mouth of the bottle. It pours easily from a small dispensing bottle, spreads smoothly and, upon drying, leaves a film that does not easily rub off onto fabrics. Dried lotion is readily washed off with cold water.

The new product is compatible with liquefied phenol, and the phenolated lotion retains all the physical properties of the calamine lotion from which it is prepared. The new formulation utilizes the versatile hydrophilic suspending agent sodium carboxymethylcellulose. The compounding procedure lends itself to extemporaneous preparation, and no heat is required. The same suspending base could be used in the preparation of a neocalamine lotion, miscible with calamine lotion for blending to match skin colors.

Plastic Bottles for Dermatologic Preparations

Recently, says O. Canizares in *Archives of Dermatology and Syphilology* (65:730, 1952), plastic or polyethylene bottles have been widely used by cosmetic manufacturers and pharmaceutical companies. They have the advantage of being unbreakable and light in weight. The "spray-type" bottle gives a fine, vaporized or jet application, depending upon the position in which it is held and the consistency of the substance used. On certain occasions in dermatological practice, it may be advantageous to use this type of packaging. The use of the plastic bottles simplifies the application of the medicament and lends a refined touch which is appreciated by the patient.

The usual watery solutions may be easily applied with the spray-type bottle. It delivers a fine mist which may be directed toward the desired area. This simplifies the application, for no cotton or gauze is needed. Shake lotions may also be applied with the spray-type



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container, but instead of a fine mist a direct jet is obtained, which may be directed toward the affected area. The application of this type of preparation requires a little practice. Heavier emulsions cannot be applied with this type of bottle. Dusting powders, however, if finely spun, may be applied with the spray-type plastic bottle. Its use facilitates the application of the powder to certain parts of the body, such as the perineum. By this means a fine and evenly distributed application may be secured.

Lipstick Defects and Their Prevention

Defects in lipsticks may be due to a number of causes, but very often a slight formula alteration or a change in the manufacturing procedure will result in a completely satisfactory lipstick. This is apparent in the listing of some lipstick defects and their elimination as prepared by V. Vasic (*Perf. & Essent. Oil Rec.* 43:191, 1952). The defects and methods for preventing them are given as follows:

Pin points appearing on the surface of a lipstick after flaming. Different causes may be responsible for pin points or pin holes. The most probable causes are, the incorporation of air into the mass occurring while adding lakes, during mixing and milling, or if considerable agitation is employed while heating the mass prior to filling the molds, or condensation of water vapor on a chilled mold. The surest way to remove any adsorbed air is to subject the melted mass of the lipstick to reduced pressure for a short period. If the pin points are few and very small, the lipstick can be smoothed over with a finger while wearing a rubber glove, and then re-flamed.

An insufficiently shiny surface. Excessive amounts of spermaceti and cetyl alcohol dull the lipsticks' surface. Too much beeswax. To produce a shiny, brilliant lipstick a low content of beeswax is necessary.

Lipsticks solidifying in layers. If the mold is very cold, the poured lipstick mass shows a tendency to solidify in layers.

Lipsticks becoming dull and taking on a bronze appearance. In contact with the metal case the solvent removes the lacquer, permitting a reaction between the bromo acid and the metal and resulting in a marked discoloration of the lipstick. This problem may be solved by using a different metal case coating. This very often occurs some time after if the lipstick contains oil soluble colors.

Sweating. In formulation with cetyl sebacate, tetrahydrofurfuryl acetate, tetrahydrofurfuryl alcohol and carbitol as solvents for bromo acid, the lipstick shows a slight tendency towards sweating. In such cases the best method is to eliminate any special solvent for bromo acid from the formula and to increase the amount of castor oil.

Bitter taste. The perfume or some solvents for bromo acid (*e.g.* diethyl phthalate) cause a bitter taste. The incorporation of about one per cent of 2.5 per cent saccharin mixture with lanolin overcomes the bitterness. Also helpful is changing the perfume or solvent.

Drying effect on the lips. High amounts of bromo acid cause a drying effect on the lips. Cetyl alcohol in amounts higher than 5 per cent has a tendency towards dryness. The drying effect could be overcome by the incorporation of certain materials with a marked emollient effect. Absorption bases decrease the irritation and dryness caused by the reaction of bromo acid. Benzyl salicylate prevents the excessive drying action of lipstick on the lips. Only quite a small amount (no more than five per cent) needs to be used.

Lack of indelibility (the lipstick easily coming off the lips). The indelibility of the lipstick refers to adhesion of the lipstick mass as a whole, not merely to the bromo acid stain left after the waxes and oils have left the lips. The different grades of bromo acid do not give the same degree of indelibility to lipsticks.

The percentage of mineral oil should never be too high or else the lipstick will come off readily. Insoluble fillers such as talc, china clay and chalk, which may facilitate spreading of the lipstick, have the drawback of causing the film to be more easily removed from the lips. Only zinc oxide or preferably titanium dioxide should be used, if at all, for improving or shading a color. Absorption base emphasizes the life of the film on the lips. These bases are very closely allied to lanolin but do not possess the stickiness of anhydrous lanolin. Cetyl alcohol helps in the permanence of the stain. Lecitin lowers the interfacial tension between the lipstick mass and the lips, causing greater penetration of the dyestuff.

A too sticky lipstick. If the amount of anhydrous lanolin is over 15 per cent, the lipstick is likely to become too sticky.

A grainy lipstick. Too much paraffin may cause graininess; a too high temperature during the melting of the mass; solidifying in the mold for too long a period. Zinc oxide tends to develop graininess.

Lipstick containing dark spots. The lipstick mass after milling with pigments should be melted and strained through muslin, otherwise it may contain tiny dark-colored spots on the surface and through the whole mass.

A lipstick not leaving a thick film on the lips. This is due to an insufficient amount of pigments. Also, the lipstick is too hard.

White film at the edge of the lips. It is claimed that since lanolin absorbs water it may form an emulsion which gives to the lipstick application an undesirable whitish tone.

Tendency to form white flakes upon exposure to air. Cocoa butter has a tendency to form white flakes upon exposure to air.

Lipstick becoming rancid with age. Hydrogenated oils under certain conditions tend to become rancid. Cetyl alcohol upon exposure to air and moisture becomes rancid with age.

T.G.A. Standard for Propylene Glycol Monostearate

On May 1, 1952, the Toilet Goods Association issued Specification No. 41 for propylene glycol monostearate, non-self-emulsifying. The compound is described as a white, wax-like solid containing not less than 50 per cent of the monostearate. Standards are given and, where needed, test methods are listed for such characteristics as color, odor, taste, solubility, melting point, residue on ignition, acid value, moisture, tittre, free glycol content, monostearate content, and saponification value, acid value and iodine value of the separated fatty acid. The Specification also provides details on the procedures for determining the free glycol and monostearate content.

Ointment for Diaper Rash

Diaper rash, says G. Perrins (*Retail Chem.* 23:30, March, 1952) is often a distressing occurrence with babies. An ointment which has been tried with success, and is well recommended by a doctor who found it useful in treatment of his own baby, has the following formula:

Eucalyptus oil	**40 minims**
Zinc ointment	**2 drachms**
Hydrous wool fat	**2 drachms**
Soft paraffin, to make	**1 ounce**

It is said that the use of this ointment prevents the possibility of any rash occurring on the delicate skin.

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Patent Thoughts and Trends

*by Thomas Cifelli, Jr.**
PATENT ATTORNEY

REVIEW OF U.S. PATENTS ON ESSENTIAL OILS

In view of the interest which previous reviews of this nature have engendered, it is thought that a review of U.S. patents issued to date on essential oils will meet with similar acceptance.

As stated in connection with previous reviews, one should not assume that this review is exhaustive to the extent that it will take up every single patent issued by the United States Patent Office dealing with essential oils. All that can be said for this review is that it will take into consideration every patent classified by the U.S. Patent Office in Class 260-236.6, entitled Essential Oils and Reaction Products Thereof. While these reviews have the indicated limitations, they are believed helpful to those interested in making surveys in the fields covered.

One more explanatory note appears to be in order. Since U.S. patents operate as legal property rights for a period of seventeen years from the date of issue, there is no point in considering the claim coverage of patents more than seventeen years old. However, in line with previous practice, an indication of the amount of claim protection will be given in connection with all presently unexpired U.S. patents, i.e., those patents which have not run their full seventeen year course.

Expired U. S. Patents

U.S. 243,510—Process of Obtaining Perfume of Natural Flowers, and Apparatus Therefor—issued June 28, 1881 to R. A. Chesebrough.

Chesbrough's process deals with an improvement in "enfleurage". Instead of placing the flowers in direct contact with the absorbing grease, they are placed in water or moist earth, or any moist material, in the same chamber with the absorbing agent, or in a separate chamber communicating with a chamber containing the grease, the point being to have the perfume circulate over or in contact with the absorbing agent without the flowers themselves making contact.

*Gaylor, Cifelli & Jurick, Newark, N. J.

Instead of becoming worthless in about a day, the flowers are said to keep alive for several days, and the yield of perfume is greater.

U.S. 475,437—Extracting Perfumes—issued May 24, 1892 to Robert A. Chesebrough.

In order to overcome the disadvantages associated with extract made by the "enfleurage" process, Chesbrough forces the perfume-laden air surrounding the flowers directly into an absorbent, such as "cologne spirits", thereby avoiding the use of grease.

U.S. 487,837—Process of And Apparatus For Making Essences—issued December 13, 1892 to Hector Huvelle, of Weatherford, Texas, assignor of one-half to Gustavus A. Tandy, of same place.

Using alcohol as a solvent pure essences of celery, ginger, and other plants are made by a process involving fractional distillation, the still employed being rather crude in the light of modern apparatus. Dilute sulfuric acid is used to extract perfumes from flowers, the acid being neutralized after the extraction.

U.S. 763,151—Process of Electrically Extracting Essential Oils—issued June 21,1904 to G. D. Burton.

Burton extracts essential oil from bark such as tanbark by immersing it in a suitable menstruum, such as water, and passes an electric current sufficient to raise the liquid to a temperature sufficient to extract the essential oil

U.S. 775,502—Process of Extracting Oleo-Resin From The Peel of Citrus Fruits—issued November 22, 1904 to Edward J. Sheehan, of Pasadena, California, assignor to San Gabriel Valley Essential Oil Company, of Pasadena, California, a corporation of California.

Products having a flavor and aroma more nearly resembling that of fresh citrus fruits are obtained by breaking up the oil cells of the peels and then extracting the essential oil and flavoring resins by means of a volatile solvent.

This process is said to be better than those merely depending on pressing out the juices because the solvent extracts the resins not obtained in pressure processes.

U.S. 1,046,568—Method of Separating Substances—issued December 10, 1912 to Frederic Ecaubert.

Ecaubert claims a method especially useful in the manufacture of perfumes or in the art of removing odors from a retaining agent. His method consists in mixing the material holding the odor with another material having a greater attraction for the odor and having a different specific gravity and a lower melting point, exposing both materials in a liquid form and in a substantially constant mass to centrifugal action and during this action, while the materials are being separated, cooling the mixed materials while in constant mass to a temperature between the melting points of the materials until the first named material solidifies, thereby leaving the odor-attracting material in a liquid form.

U.S. 1,211,969—Extracting Essential Oils—issued January 9, 1917 to Edward J. Sheehan, of Pasadena, California, assignor of one-half to William S. McCay, of Pasadena, California.

The basic idea of this patent is to use as a solvent a fraction obtained from the essential oil itself. The essential oil is distilled and the volatile part is used as a solvent for the extraction of additional essential oil from the oil-bearing cells of the source materials, such as citrus fruit. After the extraction, the non-volatile constituents are added to the extracted material.

U.S. 1,786,630—Perfumery—issued December 30, 1930 to Ebenezer Emmet Reid.

Reid proposed a process analogous to that of "enfleurage", consisting essentially in utilizing porous mineral gels such as silica gel.

Improvements claimed over the "enfleurage" process were truer odors, lower cost, and quicker results.

U.S. 1,814,888—Process For The Recovery of Essential Oils From Lemons And Other Fruits of Trees of The Genus

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Citrus—issued July 14, 1941 to Alexander Hutcheon Bennett.

Instead of using plain water on the ruptured walls of the oil cells in the rind or peel of citrus fruits, Bennett uses water made slightly alkaline. He claims that as a result there is a marked inhibition of oxidation, resinification and other deleterious reactions. Also, the resulting oil and water emulsion are more easily separated than before and the yields and quality are improved.

Unexpired Patents

U.S. 2,106,200—Method of Extracting Perfume Materials Unstable to Heat—issued January 25, 1938 to Philip L. Young and Peter J. Gaylor, assignors to Standard Oil Development Company.

Low boiling hydrocarbons such as ethane, ethylene, propane, propylene, butane, butylenes, cyclo-propane or cyclobutane are suggested as extraction solvents for the extraction of essential oils.

Claim 3 is illustrative:

Method of extracting perfume materials unstable to heat matter containing same, comprising subjecting such matter under pressure and at 0-150° F. to the action of a hydrocarbon solvent having 2-4 carbon atoms per molecule in the proportion of one to ten pounds of solvent per pound of matter to be extracted, separating the hydrocarbon solution from the unextracted portion, cooling said hydrocarbon solution to −10 to −80° F., separating the hydrocarbon solution from the precipitated matter, and removing the solvent from the resulting solution by distillation of the solvent at −80 to 150° F.

U.S. 2,154,713—Process For Extracting Ethereal Oils—issued April 18, 1939 to Willem Rhijnvis van Wijk, Amsterdam, and Willem Johannes Dominicus van Dijck, The Hague, Netherlands, assignors to Shell Development Company.

This patent involves a double action extraction, the natural ethereal oil being subjected to the extracting action of two solvents in countercurrent, the first solvent being a polar substance and the second solvent being a non-polar substance. The thought is that the polar substance dissolves the terpene alcohols, aldehydes, esters, phenols, and aromatic aldehydes or ketones.

Claim 1 is typical:

A process for separating ethereal oil containing constituents of different dipole moments into fractions containing concentrates of different constituents by means of solvents, comprising the steps of subjecting said oil to the extracting action of a liquid polar preferential solvent for a non-hydrocarbon ethereal constituent of said oil having a relatively high dipole moment, and a non-polar solvent in the liquid state, said solvents being at least partially immisicible under the extracting conditions in the presence of said oil, said extracting conditions being such as to cause the formation of a liquid phase rich in said polar solvent having dissolved therein a concentrate of said non-hydrocarbon constituent, and a liquid phase rich in said non-polar solvent having dissolved therein a concentrate of a constituent of said oil having a lower dipole moment than said first non-hydrocarbon component, and separating the said liquid phases from one another.

U.S. 2,158,670—Process For The Recovery of Essential Oils—issued May 16, 1939 to Charles Douglas Barnes and William A. S. Wright, assignors to Union Oil Company.

The advantages of the cold press and stem distillation processes for extracting oils from citrus peels, without their disadvantages, are realized by utilizing liquid normal butane or similar solvents. The yields obtained are better than is the case with the cold pressed processes and the quality of the extract is said to be better than that obtained by steam distillation methods.

Claim 1 is typical:

A process for the purification of citrus oil containing resinous impurities which comprises grinding citrus peel in the presence of water and thereby forming a slurry, commingling said slurry with a liquefied normally gaseous hydrocarbon solvent under sufficient pressure to maintain said solvent in a liquid state, settling the mixture of slurry and solvent under pressure and thereby forming a solvent layer containing the citrus oil and a slurry layer, separating said layers, cooling the solvent layer to precipitate resinous material, removing the precipitated resinous material from the solvent layer and removing the solvent from the deresinated oil.

U.S. 2,282,808 — Stabilization of Essential Oils—issued May 12, 1942 to Sidney Musher, assignor to Musher Foundation Incorporated.

Musher proposes the stabilization of essential oils by treating them with the concentrated water soluble extract of cereals and grains. The extracts may be prepared in different ways and may be added at many stages to products subject to deterioration. It is claimed that even if the extracts are not completely soluble in the essential oil to be stabilized this will not decrease their efficiency as stabilizers, as the insoluble material may be filtered off, preferably following heating in the oil being stabilized to a temperature and excess of 250° F. and desirably in excess of 350° F.

Claims 1 and 6 indicate the scope of protection:

1. A composition containing a substantially unoxidized essential oil, said essential oil being subject to oxidative deterioration upon standing or heating in the presence of air and said composition containing sufficient substantially unoxidized oil to produce deterioration of the composition upon oxidative deterioration of said oil, said composition containing the reaction product of a relatively small amount of an oil insoluble, carbohydrate containing fiber free and starch free antixoidant material extracted by a solvent selected from the group consisting of water and alcohol from a finely divided raw unbleached low oil and low lecithin containing cereal flour, said antioxidant material having been dispersed throughout the body of the composition, said reaction product having been formed by heating said antioxidant material with the oil at a temperature of at least about 250° F.

6. The process of stabilizing essential oils which comprises homogenizing said essential oils in a carbohydrate containing, fiber free and starch free extract of a cereal, said extract extracted by a solvent selected from the group consisting of water and alcohol from a finely divided, ray, unbleached, low oil and low lecithin containing cereal, said emulsion being subjected to an elevated temperature, at least about 250° F.

Recent Patents

2,595,041—**G. D. Searle & Co.—Hydroxyalkyl Derivatives of 6-Amino-1,2,3,4-Tetrahydro-2,4-Pyridimine diones.**

2,595,099—**Am. Cyanamid—Aminoesters of N-substituted Pyroolidine 2,5-Dicarboxylic Acids.**

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Industry's Books

Soluble Silicates (*Their Properties and Uses, Volume I · Chemistry*), by James G. Vail, D.Sc., Member of the Board of Directors, Assisted by John H. Wills, Ph.D., and the staff of Philadelphia Quartz Co., American Chemical Society Monograph Series #116, 357 pp., Reinhold Publishing Corp., New York, (1952) $9.00.

The present monograph is divided into two volumes to provide a rapid reference source for the working technician. Volume I is devoted to the theoretical aspects of the subject covering in detail past and present manufacturing processes, properties of homogeneous and heterogeneous systems of glasses, the formation of metallic silicates and other fundamental material. Volume II, slightly larger in size, deals with the more practical considerations involving the applications of soluble silicates to industry. Here are described the film-forming properties of silicates and their uses in all manner of industrial materials and techniques including adhesives, laminates, sizing, fire protection, cements, plastics, etc. The use of soluble silicates in the form of gels and their many valuable properties as catalysts, protective agents and stabilizing materials are covered in great detail. Throughout both volumes, emphasis is placed upon principles and properties, rather than upon their degree of industrial significance.

Pharmaceutical Calculations, by Willis T. Bradley, A.B., A.M., Carroll B. Gustafson, Ph.C., B.S., and Mitchell J. Stoklosa, Ph.C., B.S., of the Faculty of The Massachusetts College of Pharmacy, Second Ed., (1952), 290 pp., Lea & Febiger, Phila., $3.75.

This edition is useful to all who are confronted by various problems in arithmetic, from conversion, calculation of dosage, dilution and concentration and preparation of specified ratio or pertage solutions, to figuring chemical ratios and isotonic solutions. The authors have revised the book to include the latest concept and practice of the subject. Every problem represents actual pharmaceutical experience. Contents: Some Fundamentals of Measurement and Calculation. Ratio and Proportion. Weights and Volumes of Liquids. Percentage Preparations. Dilution and Concentration. Isotonic Solutions. Chemical Problems. Miscellaneous Problems in Dispensing Pharmacy. Some Commercial Problems. Dilution Table. Review Problems. Answers to Practice Problems. Atomic Weights.

An Introduction to the Chemistry of the Hydrides, by Dallas T. Hurd, Research Associate General Electric Research Laboratory, Schenectady, 231 pp., (1952), John Wiley & Sons, Inc., New York, $5.50.

It is particularly appropriate that a book on the chemistry and applications of the hydrides should be presented at this time. The field of hydride chemistry is undergoing a rapid expansion, both in the scope of academic research and in the extent of industrial application. Hydride compounds, considered as laboratory curiosities only a few years ago, are now being produced industrially on a large scale. Outstanding advances in the theoretical and descriptive aspects of hydride chemistry are being made in university laboratories. Exciting new avenues for research and investigation are being uncovered. This book is not intended to be a "catch-all" reference book. The principal interest is in a critical and coordinated presentation of the theory, the properties, and the reactions of the hydrides that will be of value to the chemist.

The Potential Negro Market, by Joseph T. Johnson, A.B., M.B.A., Assistant Professor and Acting Head, Department of Economics and Business Administration, Lincoln University, 185 pp., Pageant Press, New York, (1952) $4.50.

Facts about the untapped Negro Market—where the most changes are taking place—are uncovered in this study written by an authority on marketing in the United States. In this series of surveys and statistics, the author shows how the Negro consumer's buying habits closely follow those of the white, thus affecting the economic growth of the Negro Market. Since the family income of the Negro is at a record high, the author has made a survey of the buying habits of the average Negro consumer. The resulting statistics are amazing, and conclusions prove that the average Negro seeks the same quality of merchandise as the white—a fact that is vitally important to the advertiser as well as to the manufacturer. Although there have been some steps taken to tap the Negro Market, the greatest amount of work lies ahead. American industry must realize the need for appealing to this Market, and this survey tells how, when, and where.

Antibiotics (*A Survey of Their Properties and Uses*), published by direction of the Council of The Pharmaceutical Society of Great Britain, 290 pp., 2nd Ed. The Pharmaceutical Press, London, (1952) 25s. 10d.

The first edition of this book was published as soon as the first antibiotic — penicillin — became commercially available. Today, at least four other antibiotics, streptomycin, chloramphenicol, aureomycin and terramycin, are in general use and the scope of the book has therefore been enlarged to include details of these as well as of the bacterial antibiotics such as tyrothricin, bacitracin, and the polymixins. Their properties and uses are discussed under the heads: Commercial manufacture, chemistry, stability, standards and methods of assay, experimental background, clinical applications, veterinary practice and pharmacy. There is a chapter which deals with the legal aspects of antibiotics and a list of commercial preparations is provided. The sections on the use of antibiotics in clinical and veterinary medicine have been planned to provide easy reference to specific pathological conditions, and in the pharmacy section the most suitable method of dispensing a wide variety of preparations is discussed, with special attention to the effects of buffering solutions, preservatives, sterilization and storage. Examples are given of model forms of labels and of the planning of aseptic rooms.

Perfumer's Shelf

Argemone Oil in Mustard Oil

S. C. Chakravarti (*J. Proc. Inst. Chemists*, India 23:96, 1951) states that since argemone oil as an adulterant in mustard oil may cause epidemic dropsy, its detection is important. This adulterant can be detected by the following procedure: Shake 5 cc. of the suspected oil with 2 cc. of concentrated hydrochloric acid in a test tube for 30 seconds, then heat for two minutes in a boiling water bath. Remove the tube, shake, and heat it two times more. Cool for three minutes, then hold the tube in a slanting position and add 0.2 cc. of a solution prepared by dissolving 25 Gm. potassium bromide and 1.6 Gm. of potassium bromate in 90 cc. of distilled water. Roll the tube gently to mix the contents without disturbing the upper oil layer. With pure mustard oil, a light yellow color (bromine) appears in the acid layer. With oil containing 0.025 per cent argemone oil the color is very light orange, but with increasing concentration it passes through orange to crimson until, at above 0.5 per cent, it appears as an orange-red precipitate.

Japanese Camphor Treatments

A series of Japenese patents granted to M. Ona describes various methods for treating camphor oil. Thus, according to Japanese patent, 173,817, white camphor oil is mixed with 70 to 75 per cent methyl alcohol. The insoluble terpenes are removed and the solution is diluted with methyl alcohol to 40 to 50 per cent to give a cineol layer and an alcoholic lager.

Japanese patent 173,819 specifies that one and one-half tons of 75 per cent methyl alcohol be added to a ton of white camphor oil (containing 23 per cent of cineole). The mixture is agitated for two hours and allowed to stand, after which the insouble *alpha*-pinene, camphene, dipentene and limonene are removed. The solution is then distilled to recover the alcohol and the residue containing cineole and camphor is separated by fractional distillation; giving. 220 kg. of cineole and 30 kg. of camphor

A modified procedure is given in patent number 173,820. In this method, the alcohol solution, after separation of the hydrocarbons from cineole and camphor, is cooled to −10°C. to crystallize out the cineole and camphor, filtered or centrifuged to remove the alcohol, and the resdue is separated by fractional distillation.

In the last patent of the series, number 173,821, a method is described for treating high-boiling camphor oil, in which green camphor oil is treated with 80 to 85 per cent methyl or ethyl alcohol to dissolve the sesquiterpene alcohols and separate them from the insoluble sesquiterpene hydrocarbons.

Russian Wild Mint Oil

In a report on the essential oil of wild mint (*Mentha longifolium*), M. J. Goryaev and V. R. Shvakina (*Vestnik Akad. Nauk Kazakh. S. S. R.* through *Chem. Abstr.* 46:1718, 1952) state that steam distillation yields 0.57 per cent by weight (relative to the air-dried material) of the oil, which has the following properties:

Specific gravity	**0.974**
Index of refraction	**1.473**
Saponification number	**127.47**
Ester number (after acetylation)	**192.7**
Ester content	**44.21 per cent**

The bound menthol content was 19.9 per cent and the total menthol was 57.37 per cent. About 82 per cent of the oil boils at from 80 to 110°C. at 10 mm. Lower fractions appear to consist of esters of low molecular weight, up to possibly isovalerates. The main fraction gives phenol tests as well as tests for aldehydes, pineol, and much menthol.

Determining Carvone in Spearmint Oil

An improved apparatus incorporating a magnetic stirrer was developed by La V. D. Swall, J. E. Dusenberry and W. T. Gloor, Jr. (*J. A. Ph. A.*, Scient. Ed. 41:280, 1952) for the determination of carvone in spearmint oil by the neutral sulfite method. By using this equipment, the time required to complete the assay is greatly shortened, the loss of volatile constituents of the oil during the assay is prevented, and the operation of the assay is simplified. In addition, a spectrophotometric method of determining the carvone content of spearmint oil has been studied, using solutions of different concentrations of carvone in "carvone-free" spearmint oil and diluting with 95 per cent ethyl alcohol. A graph can thus be prepared by plotting concentration against absorbancy at the wave length of maximum absorption. The percentages of carvone in four samples of spearmint oil when determined from this curve were lower than those determined by the U. S. P. XIV method.

Turpentine from Ponderosa Pine

It is pointed out by L. A. Goldblatt and A. C. Burgdahl (*Ind. & Eng. Chem.* 44:1634, 1952) that the supply of southern stumpwood, which is the present source of commercial steam-distilled wood turpentine, is declining. Millions of acres of western ponderosa pine stumps are an untapped potential source for commercial production and interest in western pines as a source of naval stores has recently been revived. The composition of the turpentine obtainable by acetone extraction of stumpwood and lumber from ponderosa pine has been determined by these workers. As can be seen from the data in the following table, the two turpentines are very similar to each other, but are different from all commercial turpentines:

Component	Per Cent by Weight Stumpwood	Lumber
Acetone	0.5	<1
Benzaldehyde	<0.1	<1
dl- and *l*-α-Pinene	8.0	7
l-Camphene	0.5	1
l-*l*β Pinene	6.0	7
Myrcene	8.0	8
d-Δ^3-Carene	70	65
α-Terpinene	1.5	1
p-Cymene	0.5	1
dl- and *l*-Limonene	1.5	3
Terpinolene	1.0	2
Loss and unidentified	2.5	4

Goldblatt and Burgdahl note that inasmuch as Δ^3-carene is completely absent from all commercial American turpentines, ponderosa turpentine cannot be regarded as a simple replacement. The presence of significant amounts of

TOP NOTES by Fritzsche

A THOUGHT for the Month:

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An intensely sweet and delicate honeysuckle note for bath salts and bubble baths. ..... $ 5.00 lb.

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For brilliantines. Colored yellow. One pound perfumes and colors 55 gallons of mineral oil. $ 6.50 lb.

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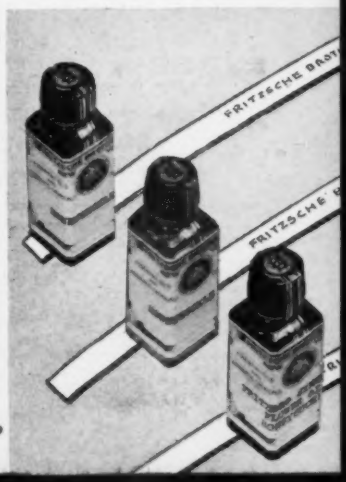

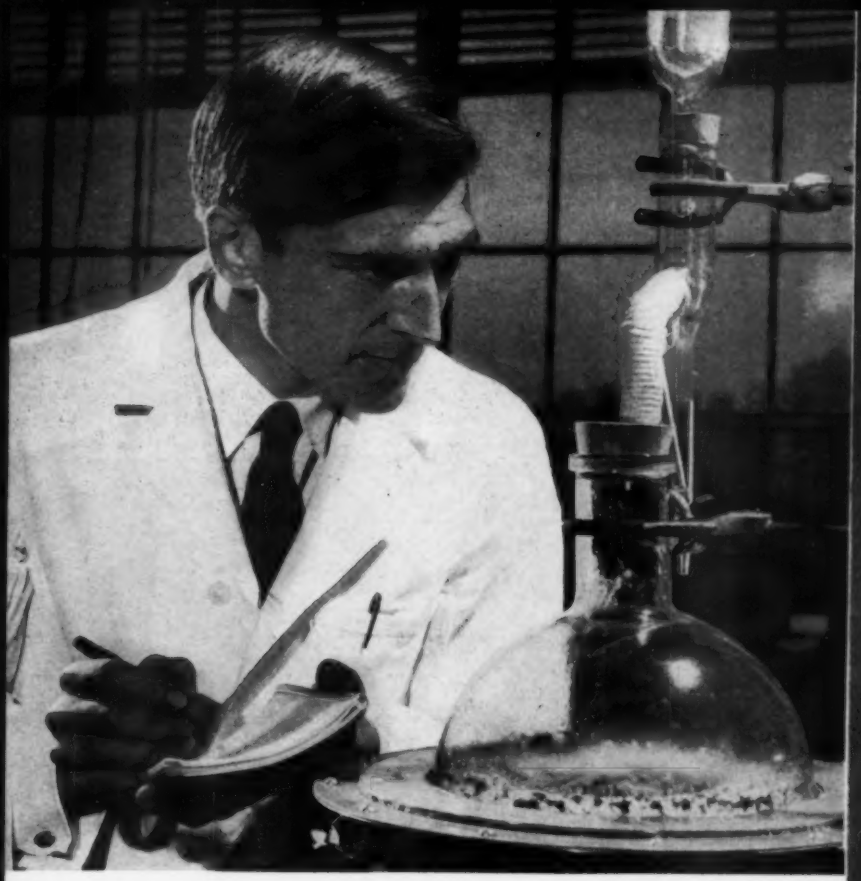

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To: PHARMACEUTICAL MANUFACTURERS

From: FRITZSCHE BROTHERS, Inc.

Subject: FLAVORING PHARMACEUTICALS

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Much of our business is devoted to the study and application of flavors.

In your business you often face problems of flavoring.

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As specialists yourselves, you can appreciate the advantages, where flavor and palatability are concerned, of turning such problems over to those whose specialty for more than eighty years has embraced the whole complex science and art of using flavors.

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myrcene is noteworthy, as this is the first time myrcene, or in fact any branched-chain acyclic hydrocarbon, has been reported to be present in turpentine from pines.

Determining Composite Oil

The following procedure is given by S. Sabetory (*Ind. parfum.* 6:66, 1951) for the determination of composite oil in a perfume, lotion, or in eau de Cologne: One to 10 cc. of the perfume or 10 to 100 cc. of the lotion or eau de Cologne is poured into brine and the mixture is extracted with pentane. The combined extracts are dried, filtered and concentrated. The liquid is transferred to a weighed Claison flask, which is immersed in water at room temperature and the solvent is removed at 100 to 200 mm. In the case of oils containing no light fractions, the water may be at 30 to 40°C. and the pressure at 15 mm. When the weight is constant, the residue represents the content of composite oil.

Italo-Mitcham Peppermint Oil

Despite its higher price, says A. Fayaud (*Soap, Perf. & Cosmetics* 25:306, 1952) the increasing interest in Italian peppermint oil proves that it has certain properties that are "highly appreciated." The secret of the aromatic richness of Italo-Mitcham peppermint oil resides in the soil, where the plant from which it is distilled is born. The grower who, about fifty years ago, imported the plant from England, or more precisely from Mitcham, where it originally grew and from which it takes its name, knew the ground to which it was destined, which extends on the two sides of the Po River. Mitcham peppermint (which took the name of Italo-Mitcham when transplanted to Italy), is a variety of Piperita peppermint, from which it differs by reason of certain morphologic and physiologic characteristics.

Distillation of the plant yields an average of 250 Gm. of raw essential oil for 100 kilos of herb. This oil contains approximately one per cent of water in infinitesimal suspension, besides some impurities from which it is freed through filtration. Analytical data of genuine Italo-Mitcham tri-rectified peppermint oil, are as follows:

Specific gravity	**0.908**
Optical rotation	**—18**
Solubility in alcohol at 70°	**3.5 vols.**
Total menthol	**45-48 per cent**

According to Fayaud, Italo-Mitcham peppermint oil is particularly suitable for the confectionery and liqueur industries, as well as for the luxury dentifrice industry, where it is already being employed with outstanding success.

Evaluating Aromatic Waters

A satisfactory method for the evaluation of aromatic waters has been devised by B. F. Cooper and A. E. Brecht (*J. Am. Pharm. Assoc.*, Scient. Ed. 41: 394, 1952). Their method is based upon the production of cloudiness in an aromatic water when a quantity of salt solution was added. By determining the quantities of a standard salt solution required to produce cloudiness in aqueous solution of a given oil, using various percentage saturations, reference curves are constructed by plotting percentage saturation against cubic centimeters of standard salt solution. These curves can be used for estimating the percentage saturation of aromatic waters of unknown saturation directly from measurements of the quantities of standard salt solution required to produce cloudiness. Sodium citrate was found to be the best salting-out agent.

In discussing the establishment of standards of quality for aromatic waters, it was suggested that the minimum quality be set at 75 per cent saturation. The following table shows the quantities of saturated sodium citrate solution necessary to produce cloudiness in 15-cc. samples of 75 per cent saturated aromatic waters:

Aromatic Water	Saturated Sodium Citrate Solution, Cc.
Camphor water, U. S. P.	2.19
Cinnamon water, U. S. P.	2.82
Peppermint water, U. S. P.	3.15
Anise water, N. F.	2.00
Fennel water, N. F.	2.50
Spearmint water, N. F.	2.39
Wintergreen water, N. F.	2.20

If no cloudiness is produced upon the addition of the appropriate quantity of saturated sodium citrate solution, the aromatic water may be considered below standard.

In addition Cooper and Brecht observed the effect of various types of storage on preserving the quality of aromatic waters. They found that aromatic waters stored over a two-month period kept equally well in amber-colored and colorless glass containers, but kept better with a cork closure than with a cotton closure. Aromatic waters decreased in quality as the quantity in the storage container was decreased, the amount of decrease being dependent upon the aromatic water employed.

Rose Geranium from Belgian Congo

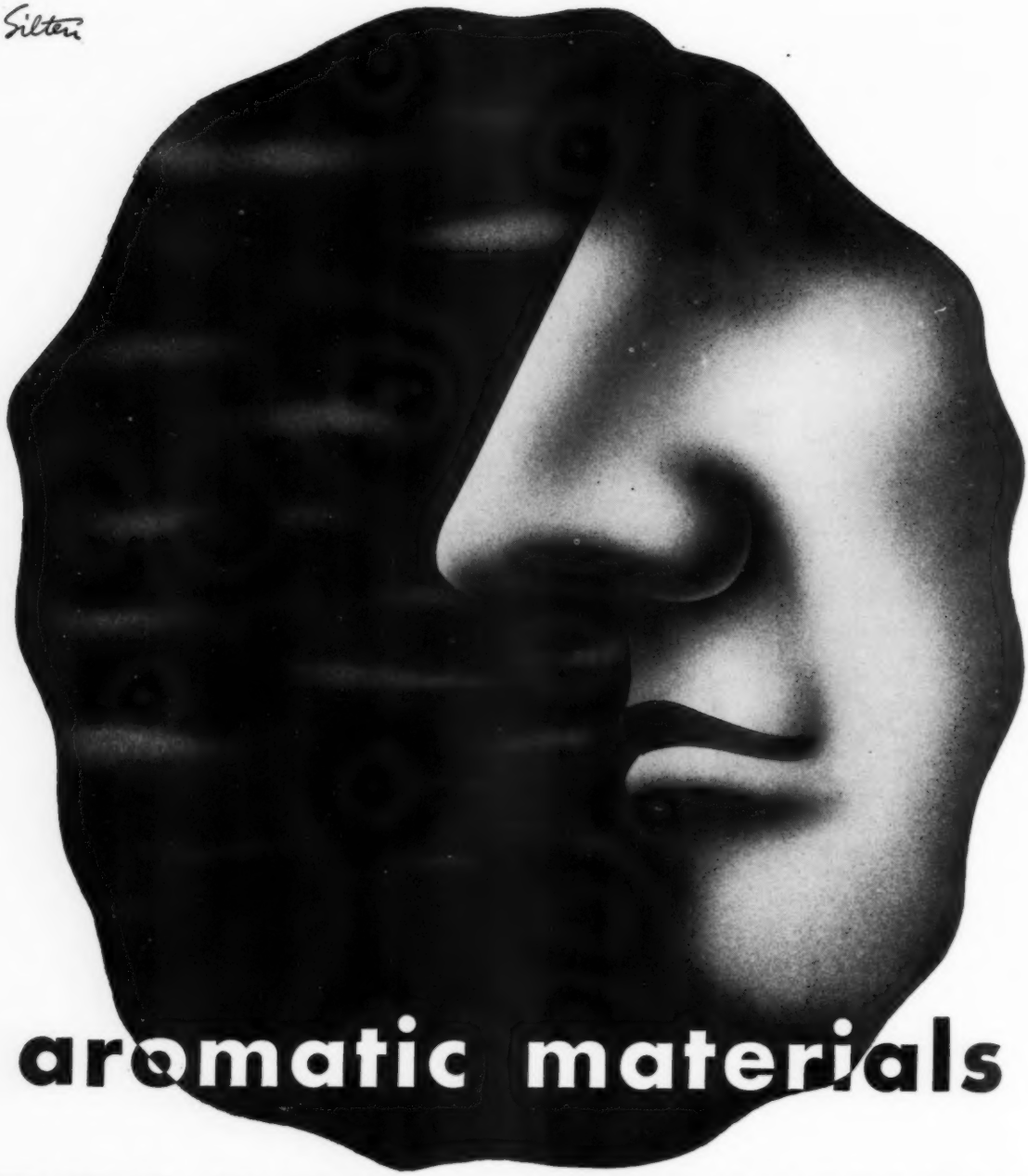
In a discussion of the essential oils of the Belgian Congo, appearing in the *International Perfumer* (2:No. 5, 1952), M. Hacquart and M. Mussens provide information on rose geranium from this area. Geraniculture is practiced in various parts of the Belgian Congo, but it is especially important in the mountainous regions of Kivu and Ituri.

All the green parts of the geranium and even the flowers contain an essential oil extracted by distillation which is called geranium oil. This oil, recalling rose oil, is sed in perfumery and soapmaking and is also used as a basis in the manufacture of organic, synthetic and pharmaceutical products. It is one of the principal sources of fine geraniol for the rose oil industry. In the Belgian Congo distillation of the oil is carried out on the fresh material. It can be effected in perforated double-bottom stills on a naked flame, with added water (1/3 of the weight of the herbage). Heating must be regular, without overheating. Extraction of the oil is done more completely by water vapor under constant pressure, in suitable appliances. The vegetable matter is loaded into mobile cages which are withdrawn from the appliance by tackle after distillation, which lasts about two hours. The capacity of the appliances varies according to the extent of exploitation. The oil must be collected in a "florentin" vessel, an appliance that allows at least a summary separation of the condensation water.

A comparison of the characteristics of geranium oil from the Belgian Congo with the Reunion and Algerian oils is given in the following table:

	Reunion	Algeria	Belgian Congo
Specific gravity	0.889—0.897	0.892—0.904	0.895—0.904
Rotatory power	—7°50 to —14°	—6°30 to —12°	—10° to —13°
Refractice index	1.462—1.468	1.462—1.472	1.467—1.473
Acid value	1.5—12	1.5—9.05	3—7
Ether value	50—78	34—70	50—61
Ethers "entiglate"	21—33%	14—29.5%	21—25.7%
Total alcohols, as geraniol	67—78%	66—77%	70—76.5%
Rhodinol, citronellol	44—52%	26—40%	34—45%

Silten



aromatic materials

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Readers' Questions

CASTOR OIL IN HAIR PREPARATIONS: We have prepared a hair tonic in a base of castor oil but it does not groom well. How can I remedy this? I have added glycerine but it still does not help. I can't reduce the alcohol percentage because the oil separates. I want a clear solution. Santiago.

I am not certain whether you are referring to a brilliantine or to a hair tonic. If it is the former, a simple brilliantine can be prepared as follows:

Castor oil	**49.0 per cent**
Alcohol	**50.0 " "**
Perfume oil	**1.0 " "**

If you are interested in a hair tonic containing castor oil, the following will serve:

Chloral hydrate	**3.00 per cent**
Castor oil	**10.00 " "**
Alcohol	**86.75 " "**
Perfume	**0.25 " "**

Dissolve the chloral hydrate in the castor oil. Dissolve the perfume in the alcohol. Add the castor oil mixture and mix thoroughly and filter.

INK STAIN REMOVER: We would like to get a formula for a cleansing hand cream designed especially to remove hectograph ink stains. Taunton.

The following formula is specifically designed for this purpose:

Carbowax 1000 monostearate	**8 lb.**
Stearic acid (triple-pressed)	**16 lb.**
Lanolin (anhydrous)	**3 lb.**
Terpineol	**0.1 lb.**
Butyl Cellosolve	**7.5 lb.**
Carbitol solvent	**7.5 lb.**
Bentonite (light-colored)	**6 to 7 lb.**
Water	**50 lb.**
Perfume	**0.5 lb.**

Melt the Carbowax 1000 monostearate, stearic acid, and lanolin and add the terpineol. Stir in the bentonite, butyl Cellosolve, and Carbitol solvent and bring the temperature to 60°C. Heat the water to 60°C. and add it to the previous mixture quickly, all at one time, stirring continuously. A paddle-type stirrer is preferred to prevent aeration of the cream. This cream is an effective preparation for removing hectograph ink stains from the skin. It is applied to the hands, rubbing well into the stains, then rinsed with water. When hands are badly stained, remove the cream with cleansing tissue and use a second application. The user should be cautioned not to wet hands before applying this cream.

DENTAL CREAM: We are interested in obtaining a formula for a dental cream containing a synthetic foaming detergent. Newark.

One of the most popular detergents of this class is sodium lauryl sulfate which has high foaming power and little taste. One of the first synthetic detergents to be used in dental preparations, and recognized as acceptable for use in dentifrices by the American Dental Association, the use of sodium lauryl sulfate is illustrated in the following basic formula:

Glycerine	**30.0 per cent**
Gum tragacanth mucilage (5 per cent)	**14.0 " "**
Precipitated chalk	**50.0 " "**
Bentonite	**3.0 " "**
Sodium lauryl sulfate	**3.0 " "**
Saccharin, flavor, preservative	**sufficient**

GREASELESS CLEANSING CREAM: I should like some suggestions for a non-greasy cleansing cream for oily skin. the cream should be removable with water in much the same manner as soap and have a similar effect. Albuquerque.

One basic composition of this type calls for the use of:

Diglycol stearate	**20.0 per cent**
Synthetic detergent	**5.0 " "**
Water	**70.0 " "**
Glycerine	**5.0 " "**

Another cleansing cream, as suggested by Harry, consists of:

Emulsifying wax (cetyl/stearyl alcohols approximately 10 per cent sulfated)	**16.0 per cent**
Water	**74.0 " "**
Propylene glycol	**5.0 " "**
Detergent	**5.0 " "**
Preservative	**sufficient**

Animal Health

Sugar for Livestock Feeding

Work done at the Utah Agricultural Experiment Station by E. B. Wilcox and his colleagues (*Farm & Home Science* 13:32, 1952) indicates that the feeding of sugar (sucrose) to beef and swine for short periods before slaughter produces slight increases in dressing percentage, improvement in color, increase in sugar content, and lower pH values of fresh cuts. The livers of the sucrose-fed animals were larger, contained more sugar, and had a better flavor and texture when cooked than livers of animals that were not fed the sugar. Sixty beef animals and 12 swine were fed amounts of sucrose varying from 0 to 25 per cent of the ration for varying lengths of time (3 to 14 days) prior to slaughter. Similar studies are being conducted on sheep and turkeys.

It is observed that while this information offers great opportunities to packers and others who process livestock, the data thus far obtained are preliminary in nature and more complete experiments should be conducted on larger numbers of animals before specific recommendations can be made on optimum amounts and time of feeding.

Anticoccidial Drugs

According to a report issued during July, 1952 two anticoccidial drugs have been studied for control of coccidiosis in chickens by poultry workers at the West Virginia University Agricultural Experiment Station. Sulfaquinoxaline and nitrophenide (megasul) were studied when fed continuously in the feed as preventives. When they are fed at the recommended levels, these drugs control the disease and permit an immunity to develop. Under crowded conditions, these drugs controlled coccidiosis satisfactorily when fed at the rate of one-fourth pound per ton. In some trials the broilers were allowed floor space ranging from four-tenths to one and one-half square feet per bird. Station workers believe that the increased returns from feeding anticoccidial drugs offset the additional cost of the mash containing the drug, even when coccidiosis was not a serious problem. Sulfaquinoxaline also was fed to broilers that were grown on old, built-up litter. This type of litter appeared to have a complementary action on the sulfa drug because the results obtained were improved.

In another series of trials at the University's Poultry Farm, sulfaquinoxaline was fed to White Leghorn replacement stock. The drug was fed up to 10 weeks of age. Results from the pullets revealed that mature body weight, annual egg production, and mortality were about the same for the treated and untreated lots. The drug when fed during the brooding period had no adverse effects on the pullets during the laying period. Thus, while, coccidiosis is still a problem to poultrymen, it can now be controlled at low cost and without any apparent injurious effects.

Prophylactic for Calf Diarrhea

Calf diarrhea, says A. B. Christian (*Cornell Vet.* 42-16, 1952) is the dread of all cattle breeders. It is an established fact that a calf deprived of colostrum has little chance of survival, and this is apparently due to a lack of antibodies. The consensus is that there is no placental transmission of antibodies in ruminants, and thus the colostrum is the only source of supply available to the newborn calf. It was found that early supplementary feeding of bovine serum solids plus vitamin K was of definite value in lowering the incidence of diarrhea in dairy calves particularly that highly fatal septicemic and virulent type of diarrhea that occurs within 72 hours of birth. The treatment was standardized to contain 100 Gm. of bovine serum solids, 25 Gm. of partially digested milk solids, plus 50 mg. of vitamin K. An optimum amount of vitamin K was included to the product to offset the bleeding tendency present in the gut due to the inflammatory process. It was considered advisable to add predigested milk solids for two reasons. In pure form the serum solids sometimes caused a transient diarrhea and, second, materials such as this provide easily assimilated food for the newborn calf. Christian stresses that it is the first feeding that is of the greatest importance, and it must be made as soon after birth as possible. The newborn animal is exposed immediately to a variety of organisms, starting in the birth canal. Without the defensive mechanism of antibodies the host is very susceptible and easily invaded.

Vitamin B_{12} in Poultry Ration

Noting that the importance of vitamin B_{12} for hatchability was first reported in 1949, H. Yacowitz, R. F. Miller, L. C. Norris and G. F. Heuser (*Poultry Sci.* 31:89, 1952) stated that the objectives of their investigation were to study further the B_{12} requirement fornormal hatchability and the effect of dietary protein level on this requirement. The relation of dietary vitamin B_{12} to the B_{12} content of the egg was also determined. They found that an all-vegetable diet containing 25 per cent protein resulted in more rapid depletion of vitamin B_{12} reserves of hens than a similar diet containing 91 per cent protein. The vitamin B_{12} requirement for normal hatchability in hens fed a 25 per cent protein diet appeared to be not greater than 0.2 μg. per 100 grams of diet.

Normal eggs were found to contain much higher levels of vitamin B_{12} than eggs from hens fed a diet deficient in this vitamin. Eggs from the same hen showed remarkable individuality with respect to their vitamin B_{12} content. A close correlation was noted between the vitamin B_{12} content of depleted hens' eggs and hatchability. The vitamin B_{12} requirement of the embryo for normal hatchability was found to be approximately 2.5 mμg. per gram of yolk.

Of related interest is the work of C. F. Peterson, A. C. Wiese, R. V. Dahlstrom and C. E. Lampman (*Poultry Sci.* 31:129, 1952). They observed that the amount of vitamin B_{12} received by laying hens influences the amount retained in the body following the

feeding of this vitamin. The amount retained will influence the per cent of eggs which will hatch after vitamin B_{12} is removed from the diet. Feeding fish meal to vitamin B_{12}-deficient hens for 8 weeks resulted in fairly high hatchability for 20 weeks after withdrawal of the supplement. This may have been due to storage of vitamin B_{12} or to a change in microflora which resulted in intestinal synthesis of B_{12} or other unknown factors.

Penicillin in Turkey Mash

The effect of adding crystalline sodium penicillin to standard turkey-rearing mash has been investigated in England by Wilson (*Nature* 169:715, 1952) To each ton of mash was added 12.6 Gm. of penicillin, and *ad lib.* feeding was started at a day old and continued for 12 weeks. Five groups of about 50 Turkeys were used, with control group kept under identical conditions. A striking increase in the growth rate occurred in every group of treated birds, and the improvement continued after the feeding of penicillin had been stopped. In one group the average weight of treated male birds at 20 weeks was 16.4 pound against 14.7 pound in the control group. The average weight of the treated hens was 12.1 pound in the treated group and 11.5 pound in the controls. The treated birds were much more active than the others, and had increased resistance to infection. Preliminary results suggest that penicillin may increase resistance to coccidosis, but it is too early yet for definite claims.

Vitamin B_{12} Requirements of Pullets

A series of experiments were undertaken by J. L. Mulligan, G. H. Arscott and G. F. Combs (*Poultry Sci.* 31:595, 1952) to determine the vitamin B_{12} requirements of New Hampshire pullets. They observed that vitamin B_{12} supplementation had no measurable effect on mortality, hemoglobin values, body weight, fertility, or egg production of the pullets. However absence of supplemental vitamin B_{12} resulted in a marked drop in hatchability. Hatchability of fertile eggs was improved to 49.1 per cent, 57.0 per cent, and 66.3 perc ent when 1.65 micrograms, 2.0 micrograms, and 2.2 micrograms of vitamin B_{12} were added per kilogram of feed, respectively. Normal hatchability was maintained when 4 micrograms of vitamin B_{12} per kilogram were fed. The vitamin B_{12} requirement for normal hatchability is considered to be slightly more than 2.2 micrograms per kilogram of ration.

Assays of the vitamin B_{12} activity of eggs showed a direct correlation between the vitamin B_{12} content of the maternal diet and the amount found in the egg. Efficiency of transmission of this vitamin from the diet to the egg appeared to be highest when low levels were fed. According to results of chick assays, eggs from pullets fed the vitamin B_{12}-deficient ration contained approximately 0.60 microgram of vitamin B_{12} activity; whereas, eggs from pullets receiving 16 micrograms of supplemental vitamin B_{12} per kilogram contained approximately 2.17 micrograms.

Preparations for Teat Injuries

In discussing the importance of that surgery in restoring milk production or saving the usefulness of a valuable animal, R. D. Hoffman (*Vet. Mec.* 47: 177, 1952) presents formulas for several useful preparations. For example, a wound powder, recommended for the treatment of cuts and lacerations, consists of:

Tyrothricin	**.05**	**per cent**
Sulfathiazole	**20.00**	**" "**
Sulfanilamide	**78.05**	**" "**
Methylrosaniline chloride	**.90**	**" "**
Phenacaine hydrochloride	**1.0**	**" "**

For treating an infected sphincter of the teat, Hoffman advises the application of a 10 per cent silver nitrate solution daily for two or three treatments. As soon as the solution is dry, an acriflavine ointment like the following is applied:

Acriflavine, N.F.	**312 mg.**
Urea, U.S.P.	**1.14 Gm.**
Sulfathiazole	**1.41 Gm.**
White petrolatum base, to make	**2 oz.**

Immunizing Cattle with Inactivated Brucella Abortus

According to A. S. Schlingman and M. C. Manning (*N. Am. Vet.* 33:397, 1952) suspensions of virulent *Brucella abortus* in sterile physiological sodium chloride solution have been inactivated by exposure of continuously flowing thin films to ultra-violet light irradiation and precipitated by addition of four per cent potassium alum solution. These inactivated organisms have been used as an immunizing agent against brucellosis in artificially and naturally infected cattle under controlled conditions.

In the experimental herd, two of the older cows treated with one 5-cc. dose of the bacterin approximately 27 months prior to a second challenge with a strain of *Br. abortus* different from that used in production of the product, were found to be infected although all carried their calves to term. Only one of the four animals treated with two 5-cc. doses was found to be infected after this second challenge. All calved at term and the remaining three were apparently free from infection.

The results obtained in the naturally infected herd indicate that a single subcutaneous injection of 5 cc. of the experimental bacterin into heifers four to eight months of age has been helpful in the control of brucellosis. Agglutinin titers usually reached the maximum in about 30 days following administration of the bacterin and persisted for varying periods. The majority of the animals returned to negative before or near the time of first parturition. Little or no influence on the course of the disease was noted following injection of the experimental bacterin into previously infected cows.

Antibiotics for Veterinary Use

A review of the current literature, made by C. E. E. Bunn and S. F. Scheidy (*J. Am. Vet. Med. Assoc.* 121: 95, 1952), indicates that eight antibiotics have been demonstrated to have effective therapeutic value in the treatment of some frequently encountered animal diseases or infections. The following table listing these antibiotic agents and the disease condition in which the agents have been used successfully has been prepared by Bunn and Scheidy:

	A	B	C	N	P	S	T	Ty
Anthrax					+			
Actinomycosis						+		
Blackleg					+			
Bovine mastitis	+		+	+	+	+	+	+
Calf diphtheria[1]	+				+			
Calf pneumonia	+		+		+	+	+	
Calf scours	+		+			+	+	
Canine distemper[1]					+	+	+	
Conjunctivitis and keratitis	+	+	+	+	+		+	
Cystitis and nephritis (dogs)	+		+		+	+	+	
Endometritis (metritis)	+				+	+		+
Enteritis and diarrhea	+	+	+	+		+		
Feline enteritis (distemper)[1]	+		+		+	+	+	
Furunculosis	+	+	+	+	+		+	+
Leptospirosis	+				+	+	+	
Osteomyelitis	+	+	+		+		+	+
Otitis externa	+	+	+	+	+	+	+	
Pyelonephritis					+			
Shipping fever[2]	+		+		+	+	+	
Sinusitis (turkeys)	+		+			+		
Skin infections, infected wounds	+	+	+	+	+	+	+	+
Strangles (horses	+		+		+		+	
Superficial abscesses	+	+	+		+		+	+
Swine dysentery	+	+				+		
Swine erysipelas					+	+		

[1]Secondary bacterial invaders. [2]Hemorrhagic septicemia.

A = aureomycin; **B** = bacitracin; **C** = chloramphenicol, (Chloromycetin); **N** = neomycin; **P** = penicillin; **S** = streptomycin; **T** = terramycin; **Ty** = tyrothricin.

These three types of
ROCHE VITAMIN A
will meet most needs

The chart below summarizes the properties of three types of Roche vitamin A palmitate and acetate. These types have been found to be very suitable for most pharmaceutical manufacturing. Samples gladly submitted on request.

ROCHE VITAMIN A PALMITATE & ACETATE						
TYPE	DESCRIPTION	POTENCY	ADDITIVE*	STABILITY	USAGE	NOTES
P 1 M O	Vitamin A PALMITATE	1,000,000 U.S.P. (XIV) units per gram	Edible oil *only* for standardization	Excellent	For manufacture of tablets, aqueous dispersions, capsulated products	1
P 1.3	Vitamin A PALMITATE	Ranging between 1,250,000 and 1,500,000 U.S.P. (XIV) units per gram	None	Excellent	For manufacture of oil-free preparations (aqueous dispersions)	2
A 1 M O	Vitamin A ACETATE	1,000,000 U.S.P. (XIV) units per gram	Edible oil *only* for standardization	Excellent	For manufacture of oil solutions, gelatin capsules and tablets	

*Antioxidants or other additives can be included on customer's specification. Containers will be labeled accordingly. Data on antioxidants available on request.

Notes:

(1) Does not crystallize as readily during storage and handling as higher concentrations of vitamin A palmitate and acetate.

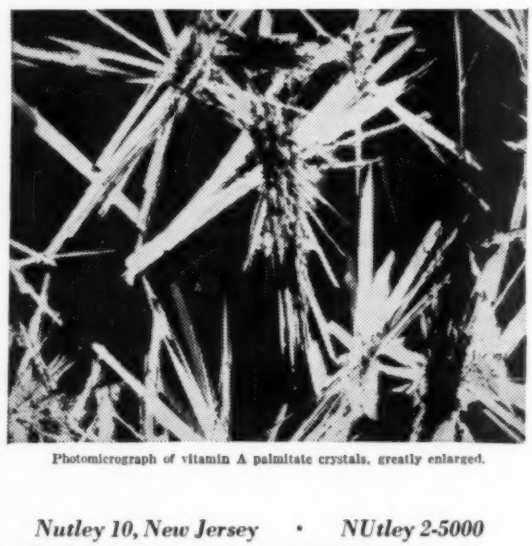
(2) More susceptible to crystallization than type P 1 M O but can be handled without difficulty when using certain precautions.

•

Two other types of vitamin A palmitate and acetate are also available. They may be used for research and special production in which special handling can be provided.

Type P 1.8 vitamin A palmitate—1,700,000 to 1,800,000 U.S.P. (XIV) units per gram.

Type A 2.9 vitamin A acetate—2,900,000 U.S.P. (XIV) units per gram.



Photomicrograph of vitamin A palmitate crystals, greatly enlarged.

Vitamin Division • **Hoffmann-La Roche Inc.** • *Nutley 10, New Jersey* • *NUtley 2-5000*

Pacific Coast: L. H. BUTCHER COMPANY, San Francisco, Los Angeles, Seattle, Portland, Salt Lake City

In Canada: Hoffmann-La Roche, Ltd., Montreal, Que.

Abreast Of The Markets

Markets More Active; Botanical Index Falls Sharply; Chlorophyll Reduced; Clove Oil Nominal, Now at $10

There was quite a bit of activity in the markets last month, indicating that the slack summer season has definitely come to an end. As shown by the various graphs, the botanicals index fell quite steeply, an event which marked the first show of activity in that field in many months. The essential oils index turned upwards for the first time since January of this year, which was most likely caused by the increasing shortages in some of the imported oils and the higher exporting prices now in effect at the origin.

The more important developments included the further reduction in citronella oil, brought about by added imports of low-cost material, the continued critical atmosphere surrounding the clove oil problem, and the low price of blackstrap molasses. Menthol, a seasonal item, has showed no activity up to the present time, but reports indicate that the synthetic material is competing to a great extent with the natural product.

Chlorophyll Reduced

Two producers of chlorophyll earlier this month cut their prices on this item from $80 to $60 per pound for the concentrated material, on a 100 per cent basis. This represents the largest reduction in price of chlorophyll since its commercial introduction.

The chief factor behind the price reduction was an improvement in production methods pointing to greater efficiency. At the same time the consumer use of chlorophyll has been increasing with no end in sight.

Indian Lemongrass Information

Current estimates put the lemongrass average in India at 28,000 for the fiscal year 1952-53 (July-January), according to *Foreign Commerce Weekly*, as compared with 35,000 in 1951-52 and 30,000 in 1950-51. The 20 per cent reduction in 1952-53 from 1951-52 is attributed to the general fall in prices and the diversion of land for growing more food crops.

Lemongrass oil production is estimated at 400 to 500 long tons in 1952-53, in comparison with 600 tons in 1951-52 and 550 tons in 1950-51. Carry-over stocks of oil to 1952-53 are estimated at about 75 tons.

Exports of lemongrass oil amounted to 1,102,230 pounds during the period from April 1, 1951, to March 31, 1952, with the United States taking 420,381 pounds.

A research station was set up at Odakkali, Kunathunad Taluk, Travancore-Cochin State in 1951. The station will analyze all varieties of lemongrass for growth, yield, and citral content, and hybridization tests between selected varieties are proposed.

The station has also proposed opening a quality control laboratory and establishing a system of cooperative marketing. The central cooperative society would be composed of a number of primary societies at all-important growing areas. These primary societies would purchase the oil from the producers and send their consignments to the central society, which would export direct to foreign countries.

Nothing New in Clove Oil

Most dealers pushed their price of clove bud oil up to $10, and even then indicated that at that figure it was nominal because so little oil was around. Concurrently with the lack of activity in bud oil, there has been a corresponding show of interest in clove leaf oil. There is ample leaf oil on stock, more than enough to satisfy all needs, according to spokesmen.

Ipecac Is Very Firm

Because the origin has not offered any ipecac root for several months, spot stocks are dwindling, and the $5.50 price now being quoted is virtually nominal. Some authorities suggest that the sudden firmness and hesitancy on the part of the producers to release quotations stems from the fact that European buyers are competing on the open market for the material.

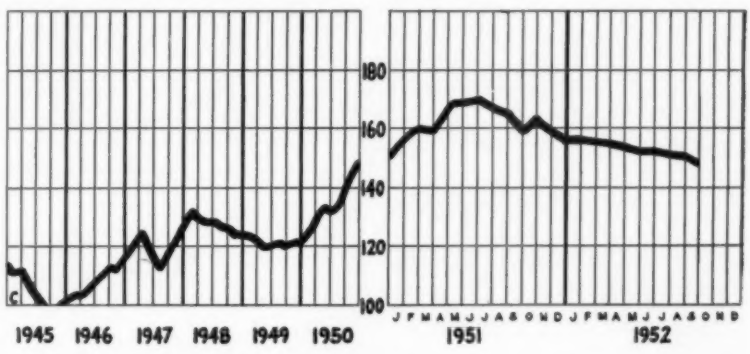
Carnauba Wax Remains Firm

With the No. 1 carnauba wax still being quoted at $1.28, and the North Country No. 3, at $1.03, consumers kept their buying to a minimum in the hopes that the wax prices would come down soon. At the present level, these prices were proving to be mostly nominal, even though replacements from Brazil, it appears, will be even higher.

The chief reason for the currently high prices of carnauba wax seems to be the

(*Continued on page 539*)

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100



The cosmetic raw materials index fell slightly from 151.6 to 147.8. Menthol was lower.

Prices quoted in this section were current on the first of this month.

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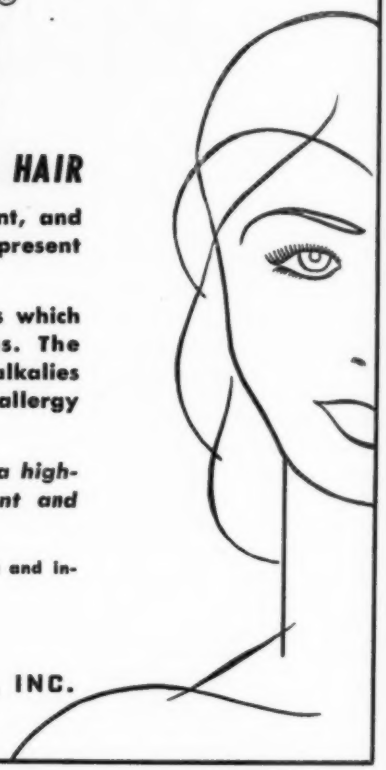

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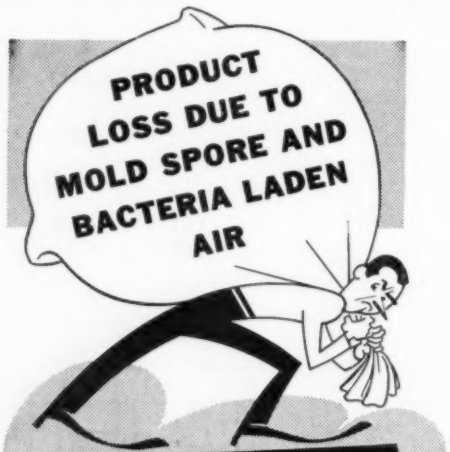

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Infected air causes untold spoilage and damage in areas where open containers are exposed during processing, where sterile conditions are required and in any place where air-borne micro-organisms affect the product or the processing.

Hanovia has developed new 1200 watt ultraviolet lamps which can be installed in the air ducts to destroy filterable air-borne bacteria, viruses and mold spores. Automatic systems can be installed so that air cannot pass without being sterilized. Used in multiple, these new Safe-T-Aire lamps can sterilize any size system up to 1,000,000 cubic feet of air per minute and more if necessary. HANOVIA CHEMICAL & MFG. CO., Germicidal Equipment Division, Dept. B-10, Newark 5, N. J.

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Molasses Available at 7c a Gallon in Some Quarters; Tartrates Reduced; Menthol Sluggish, Expected To Pick Up; Agar Is Higher

With sizable quantities of alcohol on hand, and more than enough to satisfy the present demand, there has been some discussion in the trade of a further alcohol price reduction. In fact, some shading of prices has been taking place during the past month on a small scale. All this speculation stems from the fact that Cuba is expected to offer molasses at 7c a gallon f.o.b. Cuba. Some sources felt that if the fermentation producers bought sufficient quantities of the molasses at that figure, they might reduce their alcohol prices. Whether this will come to pass is entirely speculative, and it is much too early to interpret the signs at the present time.

The alcohol and tobacco tax division of the Bureau of Internal Revenue, treasury department, released the following data last month on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during July, 1952 as compared with July, 1951.

	1952	1951
Production	Gallons	
‡Ethyl	39,291,910	34,497,062
*Completely denatured	12,813	230,146
*Specially denatured	19,025,892	23,118,208
Withdrawals		
‡Ethyl, tax paid	2,052,130	2,232,910
tax free	37,216,177	57,702,818
*Completely denatured	12,844	219,303
*Specially denatured	17,455,635	22,161,921
Stocks		
‡Ethyl	77,436,907	101,248,200
*Completely denatured	40,417	56,854
*Specially denatured	9,059,572	9,708,245

*Wine gallons. ‡Proof gallons.

Vanilla Beans Stronger

As a result of the greater activity in vanilla beans, and because of the higher prices being offered at the origin, dealers expect the spot prices of the bourbon beans will advance shortly. The bourbons are currently being quoted from $2.75 to $3.25, while the Mexican cuts extend from $2.75 to $3, and the Mexican whole beans, from $3.25 to $3.75.

Added to this is the fact that recent crops have been adversely affected by the low prices, and reports are continually being received which indicate that this year's crop of beans from the French possessions will be considerably below normal.

The Mexican beans up to this time have been relatively stable, but authorities now expect this market to advance in sympathy with the bourbon areas.

Tartrates Reduced 4½c

Domestic prices on tartaric acid and the important tartrates were lowered 4½c because of the competition offered by low-priced material from foreign sources. Tartaric acid is now selling at 40½c per pound for a 230-pound drum and 41½c a pound for a 100-pound drum. Rochelle salt is being offered in the range between 33½c a pound for a 225-pound drum and 34½c for a 100-pound drum. Cream of tartar is now selling at 35½c a pound for a 250-pound drum and 36c½ a pound for a 100-pound drum.

Menthol Continues on Quiet Side

Brazilian menthol dropped a little more last month to the range between $5.75 and $6, while the Japanese material was considerably higher at $7. The synthetic menthol was just a little lower at $5.35 and was apparently offering considerable competition for the natural product. Dealers expressed the opinion that more activity will be felt in this market later this year as the winter months set in.

Halts Alcohol Production

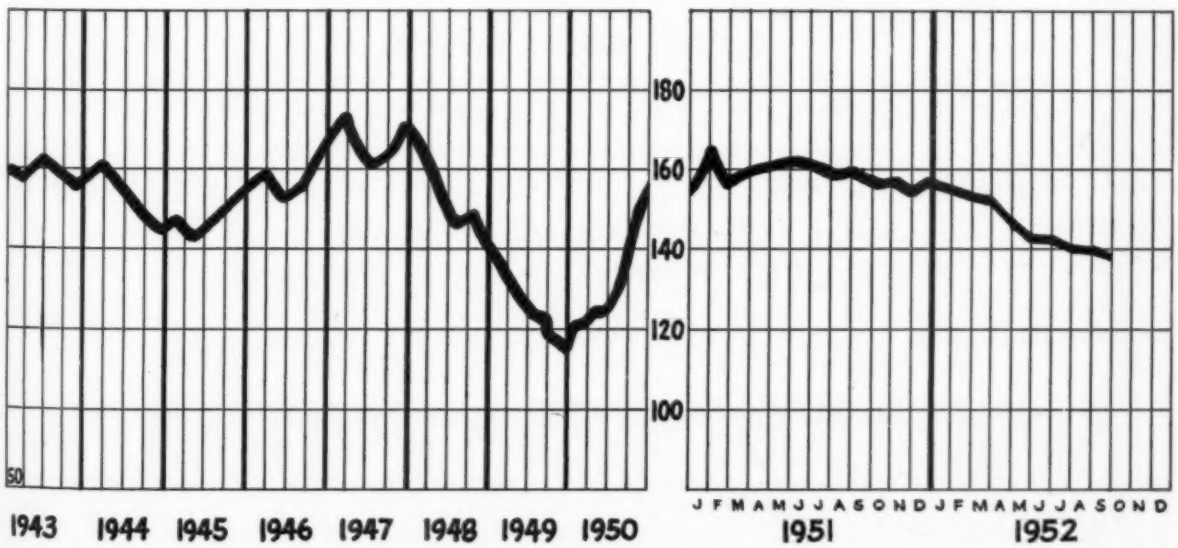
Central States Corp., operator of the government-owned alcohol plant in Omaha, and the largest in the country devoted exclusively to the manufacture of grain alcohol, is ceasing all operations. With the cutback in the government stockpile program, according to manager Joseph Palester, the plant is unable to sell its product. This plant was formerly a large supplier in the rubber reserve program.

Mr. Palester states that the company is now searching for other production used for the plant and intends to keep its 10-year lease which still has eight years left.

Agar Prices Higher

In line with recent reports of swindling stocks of agar, this market displayed a continuing firmness last month

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for September went down slightly from 139.9 to 138.0.

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EST. 1921

KESSLER CHEMICAL CO., INC.

STATE ROAD and COTTMAN AVE. • PHILADELPHIA 35, PA.

September Price Changes

UP
Agar No. 1 35c
Anise Seed Star 2c
Calamus Oil $1
Cananga Oil, Native 75c
Rectified 50c
Clove Oil $2.50
Lime Oil, Expressed 50c
Rose Oil, Bulgarian $5
Wormseed, American 1c

DOWN
Balsam Tolu 15c
Caraway Oil 25c
Cream of Tartar 4½c
Dill Oil 15c
Ergot 50c
Eucalyptus Oil 15c
Ginger Oil 50c
Ipecac Root 30c
Lavender Oil $1.25
Lemongrass Oil 15c
Linaloe Oil, Mex. 25c
Menthol, Natural 25c
Nutmeg Oil 35c
Ouricury Wax 6c
Papain, pure, powdered 20c
Peppermint Oil, Natural 20c
Redistilled 30c
Rochelle Salt 4½c
Sage Oil, Dalmatian $1
Tartaric Acid 4½c
Vetivert Oil, Reunion $3

which was emphasized by a 35c increase to the level between $2.25 and $2.50.

Ergot Up to $4.50

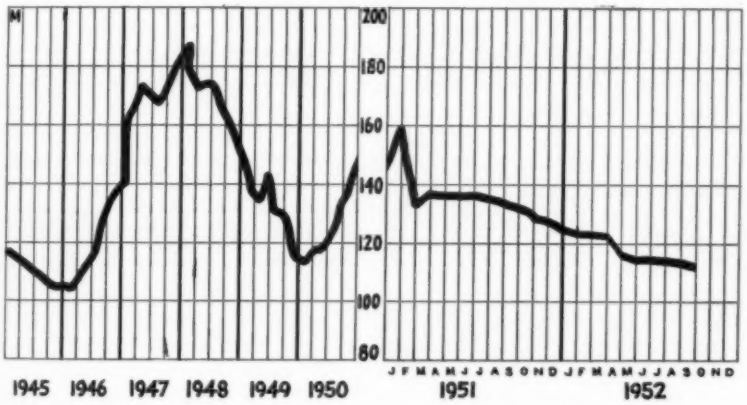
After dropping from a previous high of $7, ergot fell to $3.75 in July of this year, and now it is on the way up again. Last month it was being quoted from $4.50 to $4.75.

Carnauba Wax Remains Firm

(*Continued from page 535*)

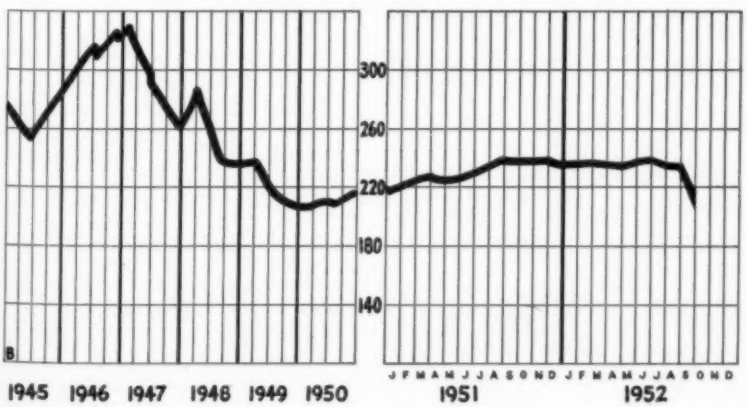
Brazilian government's support program for the new crop material. Under this arrangement, shippers are not permitted to export the wax at values below the floor prices which the government has set up. Consumers are balking at the high figures, and so the battle begins.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index declined a little from 113.2 to 112.4. Menthol and cream of tartar were lower.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index dropped considerably from 233.9 to 208.3. Agar was higher; balsam tolu, ergot and ipecac root were lower.

Anise Seed Up

Anise Seed star advanced to 72c in September, a move which corresponded with the difficulty in replacement as far as those items of Communist-dominated areas are concerned. The Spanish anise seed remained at 18c a pound.

Balsam Tolu at $4.50

Some dealers were quoting balsam tolu at $4.35, while others insisted on putting the price higher at $4.50, and on up to $4.75. All in all, there was not much business in the item on a large scale, most orders having been in the small-lot category.

Chamomile Flowers May Be Scarce

Owing to an extended dry spell in Hungary, the crop of chamomile flowers has suffered a severe setback. The price at the present time is 80 cents a pound, but since this is already nominal, it may continue higher in the weeks ahead.

Vetivert Oil Down

The price of vetivert oil fell off $3 from the previous month's figure, and is now quoted between $25 and $28. Dealers report that stocks on hand are adequate to handle domestic requirements. When replacements are necessary from the origin, there will be no difficulty in obtaining them, although the price is expected to be somewhat higher.

Ylang Oil Quite Scarce

Ranging from $18.50 to $45, depending on quality, this oil was difficult to obtain on spot. Because of the high price of the good-quality oil, consumers have been looking over the field of substitutes.

Italian Lemon Oil Higher

The pressure has eased considerably on lemon oil now that the heat of the summer has discontinued. In spite of this seasonal relief, dealers advise that stocks are still on the limited side. This lack of material is especially true in the case of the Italian oil, the price of which went up to $9.50 last month. This $4 advance is probably not as abrupt as it at first seems, because the former lower prices were being quoted for the inferior grades of oil. Today, however, Italian producers are not making any offers for these lower grades, and, therefore, the higher prices refer exclusively to the better-quality oil. It seems at the present time that the Italian prices are too high to attract much attention, so this side of the market is quite sluggish.

Peppermint Oil a Little Lower

Peppermint oil last month fell off a trifle, the natural oil now selling for $7.20 at the minimum figure, and the redistilled oil, at $7.50. In the face of the reports attesting to the good crop yields this year, and the easy access to the oil, the market has apparently become softer.

Patchouli Oil Remains at $7.75

While some sources were offering Patchouli oil at a shade under $7.75 last month, the majority of houses reported the price at that figure, or higher. There was quite a bit of oil available on spot, but not much interest was shown in it at the time. Dealers feel that when it becomes necessary to make replacements from the origin, shippers' prices may be higher, because producers are quoting higher prices.

Lime Oil Higher

Distilled lime oil remained from $7 to $7.85 in September, but the expressed material was up 50 cents to the range between $8 and $9.25. There is no immediate explanation for this advance since, as in the case of lemon oil, the interest has waned considerably. Furthermore, when needed, replacement stocks may be had with little difficulty, and there is enough on hand to take care of all immediate requirements.

Citronella Oil Down a Little

Ceylon Citronella oil continued to slide off a little more last month, presumably as a result of further arrivals of low-cost oil shipped from Pacific areas. These current shipments are probably orders of long standing which are only now being filled. The feeling in New York is that the price of the oil has just about reached the bottom and will soon become much more stable. Already, it is said, shipping prices have begun to show a stronger tone.

Cassia Oil Unchanged

Cassia oil remained in the price range between $5 and $6.50, with very little material to be had on spot, since replacement from the origin is impossible at the present time.

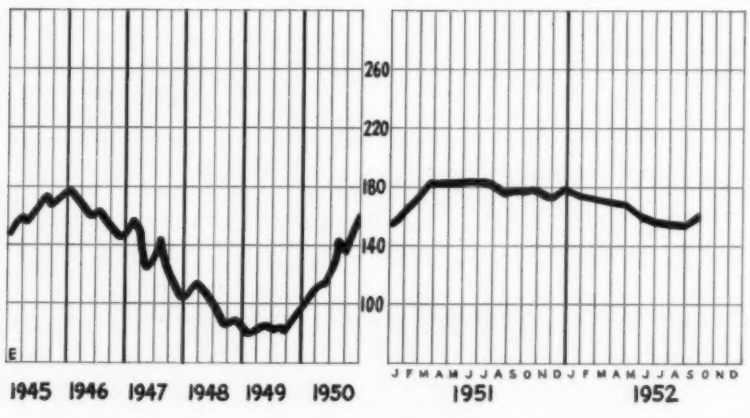
Bergamot Oil Easing Off

Although the essential oil houses in general reported no changes in the bergamot oil price, there were scattered reports of abrupt reductions in the offing, some as low as $13.50, as compared with the long-standing level of $15. In spite of this lower price, however, it was still a good deal higher than most dealers were willing to pay. As a result, there is very little interest shown in the oil at present, with the majority of buyers paying more attention to the artificial material which is selling at about one quarter the price.

Cananga Scarce, Price Higher

There have been very few offerings received from the origin on this particular oil in recent months. This has resulted in a very tight situation on the spot market and last month caused an increase in both the native and rectified oils. The former is now being quoted from $11.50 to $12.50, and the rectified, from $13.50 to $14.50. Limited quantities of both oils are available at the present time.

15 Essential Oils—Weighted Price Index. 1926 = 100



The essential oils index advanced from 155.8 to 161.5. Cananga, clove and rose oils were up; eucalyptus, lavender, lime and pepermint oils were down.

Larger Peppermint Oil Crop

The mint crop in Indiana, Michigan, Oregon and Washington, according to the Bureau of Agricultural Economics, is this year expected to add up to 2,394,000 pounds of oil, which is 21 per cent more than last year's production of 1,986,000 pounds. This is also considerably higher than the 1941-1950 average production of 1,749,000 pounds.

Breaking these figures down into the two mint crops, the Bureau notes that peppermint oil production at the present time is estimated at 1,824,000 pounds, or 15 per cent higher than the 1951 crop of 1,587,000 pounds, and 35 per cent greater than the 1941 to 1950 average of 1,351,000 pounds. In the case of spearmint oil, production of this crop is estimated at 570,000 pounds, or 43 per cent above last year's production of 399,000 pounds with the same relation to the 1941 to 1951 average of 398,000 pounds.

A further breakdown of the oil production figures showed the producing states to have provided for the following quantities of oil:

Indiana. A total of 10,800 acres was planted in 1952 for the production of peppermint, the yield amounting to 346,000 pounds of oil, averaging 32 pounds per acre. Last year's figures were 12,500 acres producing 400,000 pounds, averaging 32 pounds per acre.

Michigan. A total of 9,000 acres, producing 243,000 pounds in 1952, averaging 27 pounds per acre. In 1951 10,000 acres produced 200,000 pounds, averaging 20 pounds per acre.

Oregon. A total of 15,000 acres, producing 675,000 pounds in 1952, averaging 45 pounds per acre. In 1951, 14,000 acres produced 532,000 pounds, averaging 38 pounds per acre.

Washington. A total of 8,000 acres, producing 560,000 pounds in 1952, averaging 70 pounds per acre. In 1951, 7,000 acres produced 455,000 pounds, averaging 65 pounds per acre.

The over-all production of spearmint oil, according to the Bureau of Agricultural Economics, in the two producing areas amounted to:

Indiana. A total of 10,100 acres, producing 364,000 pounds in 1952, averaging 36 pounds per acre. In 1951, 7,600 acres produced 206,000 pounds, averaging 34 pounds per acre.

Michigan. A total of 5,900 acres, producing 206,000 pounds of spearmint oil in 1952, averaging 35 pounds per acre. In 1951, 4,700 acres produced 141,000 pounds, averaging 30 pounds per acre.

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Quality Control in Cosmetics

(*Continued from page 475*)

Performance Tests

The products of cosmetic manufacture are many and varied. The number of tests and extent of testing is necessarily dictated by what the product is purported to do, the ingredients, the pitfalls of manufacture, and possible chemical reaction products. Performance tests, while informative, are frequently impractical of general application as a routine control measure. This is true for three reasons: (1) The time necessary for evaluating the effects of a given batch are prohibitive, (2) Finding a sufficient number of subjects presents a serious problem, and, (3) It is often difficult, if not impossible, to demonstrate the action of a cosmetic product such as a cream or lotion upon single application.

Obviously, performance tests are an important part of the evaluation process which must precede introduction of the preparation into production.

Specifications for the finished cosmetic product must provide for appearance, color, viscosity, "active ingredients," odor, and correctness of formulations. Such specifications must be a synthesis of the cooperative effort of those charged with research, manufacturing and control. Such specifications will result from preliminary irritation studies, pilot batches, and panel testing. In this respect, the facilities at Warner-Hudnut are particularly effective. Closely allied to pharmaceutical research, the facilities of pharmacological and physiological laboratories are utilized in toxicity and irritation studies on new raw materials and products.

Customer complaints should not be overlooked in revising specifications of existing preparations. We maintain a carefully classified file on customer complaints and sales department complaints. While the number of complaints represent an infinitesimal percentage of sales, each one is investigated for its possible application to improved quality control.

The maintenance of uniform color control is of prime importance. Aside from cosmetics, such as face powders, rouges, nail lacquers, etc., which are used because of the colors they impart upon application, one must reckon with the uniformity of color of creams, lotions and perfumes. We are all familiar with the customer complaint that her jar of hand cream or cleansing cream or astringent lotion did not perform as previous jars—the color is different so "there must be something wrong with this batch." Standards for clear solutions can readily be set up using colored inorganic salt solutions as a standard, or a photoelectric cell instrument. The problem of color control with opaque liquids, creams or powders is more difficult since such preparations do not lend themselves readily to objective instrumental measurements. Unfortunately, the photoelectric cell does not differentiate between colors, and readings are affected by particle size, lustre, etc. Considerable amounts of research funds have been expended by Warner-Hudnut in an effort to put color control on an

(*Continued on page 544*)

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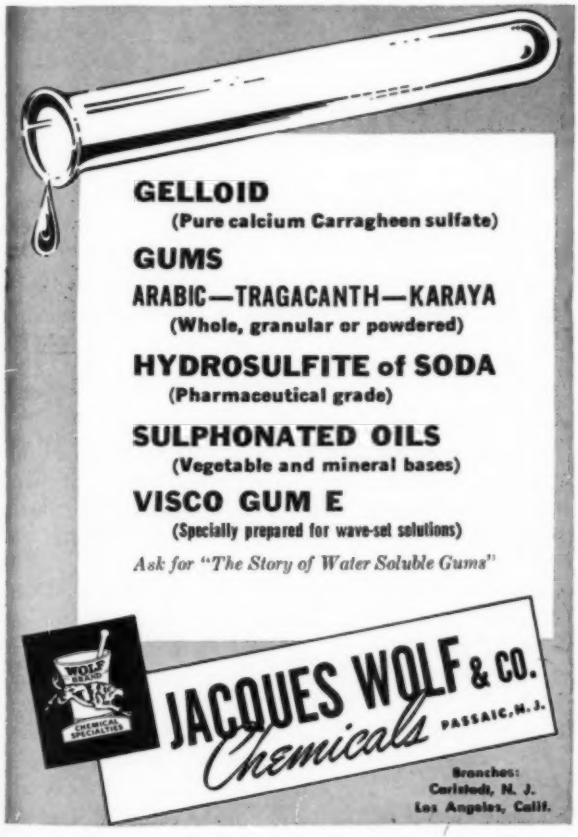

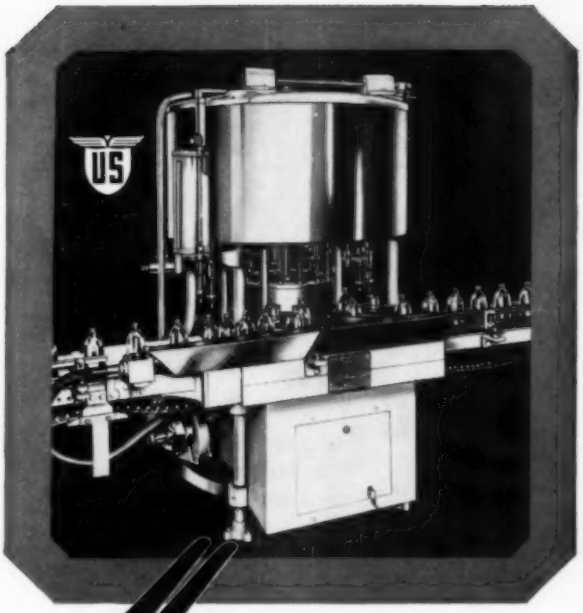

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(Continued from page 542)

instrument basis. Thus far no procedure has been found which can match the sensitivity of the human eye in judging the acceptability of, for example, a face powder. One must then turn to subjective color matching using standard preparations with the omnipresent danger of a slowly changing standard. It is imperative that a uniform light source be available for such color control. A convenient type is one which approximates the spectrum of natural light and lights an area sufficiently large for easy color matching. A uniform light source will go far toward elimination of apparent inconsistencies of judgment which are in reality inconsistencies of light due to time of day, weather conditions or incomplete spectra of ordinary artificial lighting.

The consumer is aware of and is worried by large variations in apparent viscosities of products. The apparent viscosity can be measured with precision in the laboratory by methods varying from very simple "standard orifice" type to more elaborate instruments. A very simple apparatus can be made from materials readily found in every laboratory for determination of the rate of flow through a standard orifice. Such an apparatus (for which we make no claim to originality) consists of an inner tube which is cut from a graduated cylinder. The standard orifice is cut from a Mohr pipette having a diameter between defined limits and is attached to the opened graduated cylinder by means of a rubber stopper. The jacket tube is held in place by rubber stoppers and inlets and outlets in the jacket provide for convenient control of temperature by circulating water. The time required for a given volume of liquid to flow between two points on the graduated cylinder is measured. While differences in apparent viscosity are readily detected, it is difficult to do something about it to the batch. The final apparent viscosity is a function of many variables; variations in mixing time, speed of mixing, temperature, duration of heating or cooling, raw materials and storage time all can and do contribute to the final apparent viscosity.

Stability of emulsions and suspensions are standardized on the basis of centrifuging under standard conditions, or the addition of an electrolyte or by gentle mechanical agitation.

Active Ingredients

The determination of the "active ingredients" where they can be clearly defined in finished cosmetics such as a waving lotion and a deodorant, insures the product to be within limits of previously defined effectiveness and toxicity. The quantitative determination of alcohol and/or water are good indications that there have been no gross errors in formulation. The determination of water is of sufficient importance to mention a few of the methods which lend themselves readily to cosmetic applications. The Karl Fischer Reagent, of course, is highly specific for water as opposed to total volatiles which is determined when the drying method is used. A determination can be done in a matter of minutes and lends itself readily to in-process control. The re-

agent must be protected in the usual manner from atmospheric moisture. The spent reagent is a characteristic chromate yellow and the end point is a typical iodine brown. Total volatiles in creams and ointments can be determined very quickly using a plane weighing glass. This apparatus, developed by one of our associates, Dr. W. Heidbrink in Memmingen, Germany, is described in the German Publication, *Fats and Soaps*. It consists of two ground glass faces, one of which is fixed, the other is movable and can be hung on an attached support. A small amount of substance to be tested is placed on the ground glass surface and the faces are pressed together. Weighing is done with the faces in contact to prevent evaporation during the weighing process. The faces are then separated, the movable one hung on the attached support, and the whole apparatus is placed in the oven at the required temperature. The tremendously increased surface of the ground glass faces reduce drying time to a minimum. The apparatus is weighed again and the total volatiles are determined by difference. This apparatus is now available domestically.

Odor is usually a characteristic of paramount importance in cosmetic products. Several systems of odor classifications have been introduced and are in use as valuable research tools. The determination of physical constants such as boiling point, refractive indices, optical rotation, and application of infrared spectrophotometry to essential oils provide valuable data for control of odor producing raw materials. It would appear, however, that at least for the present, the control of quality of the odor of the finished product must remain, to a great extent, to an expression of the art of the perfumer. At Warner-Hudnut, the fragrance of each batch is checked by the perfumer as an integral part of the quality control testing applied to all cosmetics.

A word concerning manufacturing practice as related to quality of product. It is a truism that no quality control procedure yet devised can substitute for good manufacturing practice. No poor batch ever became a good one simply by testing it, but much improved production has been brought about by doing something about the results of those tests. The quality of the finished products is no better than the methods employed to make it. For this reason, it is essential that in the course of manufacture, every ingredient going into a batch be checked for weight or volume by a second man; that the order of addition of raw materials be adhered to rigidly; that all conditions of temperature, pressure, timing, mixing, etc., be carefully standardized and reproduced from batch to batch; that all operations be under the constant supervision of technical personnel. Just as analytical procedures and specifications must be set down in detail for each product and raw material, at Warner-Hudnut we issue "Manufacturing Directions" which describe in detail each step in the manufacturing process for each product. Such manufacturing directions are compiled as a cooperative effort between research, production, and control.

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Much of what has been said concerning the batch before it reaches the subdividing operation applies to the finished package. Certainly it is more practical to adjust a batch while it is still in the mixing tank rather than after it is in 10,000 bottles. However, changes can and do occur between the mixing and filling operations. Quality control inspectors on the line can do much to catch errors which sometimes occur even with the most conscientious manufacturing operations. Such inspectors must be on the constant alert for total fill, identity of contents, correctness of label and lot number, contamination of containers, suspension and emulsion stability. Usually such detection of errors will occur early enough in the filling operation to permit corrections and maintain most of the batch within acceptable standards of quality. Regular inspection of stocks round out the examination by quality control.

A Pharmacologist Looks at Proprietary Drugs

(Continued from page 470)

position often dictated by common sense in any situation involving opinions concerning the relative values of factual data.

Certain facts soon become apparent to the academician who pursues actively his data to the ultimate destination.

He soon learns that from the point of view of society as a whole, and the public health and welfare in particular, the philosophies governing the use of facts and their scientific application is often as important, sometimes more important, than the facts themselves.

He learns that contrary to a popular view, a majority of the drug and chemical industry is not dominated by individuals of low integrity whose principal purpose is to turn a quick dollar by exploiting poisonous and misbranded products to a gullible American public; and that a large majority of the industry recognizes the need for intelligently administered regulatory law if for no other reason than to protect a social-minded and law-abiding majority against a minority who refuse to accept the long-range view and persist in following the practices specifically proscribed by state and federal laws as detrimental to the public interest. He learns that the drug industry is sprinkled liberally with big men, mentally and philosophically, who are willing to assume large personal risks in the attempted development of some technical achievement which may have great medical or sociological significance.

It will soon be brought to his attention with considerable force that certain operators in the drug field choosing to exist on a short-range basis, are the consistent and willful violators of both moral and legal codes and who deserve and often receive the type of treatment accorded to other anti-social factors. The activity of this minority is so well-known, even to the lay public, as to not warrant further discussion here.

He will not be surprised to learn that there is in government a large body of well-trained and devoted public servants in the technical area who are honestly and intelligently trying to interpret the law in its

original intent and in light of scientific facts.

He probably will be most surprised and pained to find out that, also contrary to popular view, all of the activities of governmental agencies are not dominated by individuals of great social philosophy, but that some, and I hope it remains in a minority, are utilizing analogous or, in some instances, the identical practices of which industry is accused, presumably on the theory that the "end justifies the means" and that it is necessary to "fight fire with fire," in ttempting to protect the public from potential dangers, which from a scientific or any other point of view often turn out to be visionary hazards.

I speak of such practices as the approval of the dissemination of misleading and scientifically unproven statements in the lay press concerning toxicity of compounds in order to influence legislation; the presentation of unscientific and incompetent evidence and opinion from the witness stand; the establishment of arbitrary levels of presumed safety which bear little if any relationship to the dictates of scientifically established fact when examined without bias and in relation to need; and even, I am sad to relate, the attempted coercion of potential investigators and witnesses—these and many more.

In short, in many instances a pre-established administrative policy, which may or may not conform with the basic philosophy of the law under which such policy, if enforced, is maintained at all costs, even, in some instances, I am confident, against the scientific advice of its own technical staff. If such is not the case, the latter are unworthy of being classified as scientists.

I venture to predict that if the methods presently used by several federal agencies; for example the type which have conditioned the activities and publication of the Delaney Committee are to represent a pattern for the future, then individual scientists in academic positions will no longer be proud to offer their services to government nor to derive a certain pleasure in the fact that they have never testified against the government.

To be brutally frank, some of these agencies will find themselves in the unenviable position for which the proprietary industry is only beginning to emerge, of being unable to attract the interest of first rate scientists and physicians in their problems.

To the pharmacologist's view certain facts appear to be crystal clear. There are certain premises which, I believe, are so sound sociologically, economically, medically, legally and ethically that they cannot be logically refuted. They are so important to the future of the proprietary industry that they could be engraved on the escutcheon of your Association.

"Self-medication (and by inference self-diagnosis) is an inalienable human right and is not *ipso facto* controversial, when limited by the following corollaries:

a. Only compounds of a relatively low order of toxicity are to be made available for across the counter sale for home medication.

b. The public has the basic moral right to demand

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and to receive efficacy in the compounds which they purchase for use in home medication."

It has always been of great interest to me that the industry whose very existence depends upon the primary tenet that self-medication is necessary should permit it to become contestible in the public mind because certain members have not adhered strictly to the corollaries which I have cited especially since the controversies which do arise are invariably concerned with problems relating to toxicity and efficacy.

Present laws are in the main adequate to assure the public of relative safety. It is unfortunate that the policing was not done by the industry itself. As I see it, your principal current problem relates to the efficacy of present or potential products. In my opinion, this problem cries for a solution in your hands. Three alternative possibilities must be considered in evaluating your problem; a) The industry will take the initiative in raising its own sights and standards. b) New and efficacious agents will be uncovered which will eliminate the useless and inactive substances on a purely competitive basis. c) An aroused public, "enlightened" by the bombardments of modern day communication, will demand legislation to cover the area involved in the word "efficacy." It hardly seems worthwhile to elaborate on the implications of these statements.

Suffice is to say that you as a group will never be able to convince the more intelligent strata of the American public that you are sincerely interested in the public health and welfare until the activities and philosophies of your advertising departments correspond more closely with those of your technical staffs. Until this disparity is eliminated, you will not be able to muster the active lay, scientific and medical support which will place home medication in proper perspective and give it the dignity which it deserves. Whereas only the stupid or the biased will deny its fundamental place in modern society, the very premise itself has been obscured and rendered suspect in the public eye by some of the practices of the industry which nurtures its existence.

The very nature of this premise forces you always to deal with agents of low toxicity and usually with compounds of lower grade or possibly borderline efficacy. The few exceptions to the latter statement, vitamins, antibiotics and antihistamines, confirm rather than refute this statement. I have no doubt that this list will be extended further as greater specificity of action is obtained in as yet undiscovered substances. You are, and will continue to be, confronted, therefore, with certain problems which are indigenous to your section of the pharmaceutical industry. I cite only a few which are self-evident to a pharmacologist—Laboratory methods for evaluating low activity substances are poor and often unreliable; Criteria for determination of activity are often so inadequate that it is unsafe to put reliance on the immediate transfer of data obtained on animals to man, thus requiring carefully controlled clinical investigation. Only the best qualified specialists with a wide laboratory and clinical

experience are capable of accurately evaluating borderline toxicity or efficacy either in animals or man. The best qualified scientists and clinicians are commonly so busy dealing with more potent compounds that they are often unwilling to engage in a study of agents of borderline activity. In such situations where the accurate appraisals of results often requires statistical analysis of data, rigid control of the experiments by objective methods, the necessity for elimination of personal bias in the investigator, the elimination of therapeutic suggestion as a factor in differentiating true efficacy from that resulting from influence of the investigator on the psychosomatic behavior of the patient, we find a natural field of activity for the ignorant, the incompetent and those intent on fraud.

This all adds up to the fact that you have been in the past attempting to solve some of the most difficult problems which confront the biological scientist and the physician and doing it without the counsel of those most qualified to undertake the task.

Why have you been unable to attract the best scientists to aid you in solving your problem? A few hold back because they prefer to remain in academic seclusion, some disagree with the basic philosophy of self-medication, some dislike the scientific company of those who have counseled you in the past, some have remained aloof and unapproachable in the knowledge that a few of their scientifically unassailable colleagues have surrepticiously bootlegged, at exorbitant prices, unreliable information and opinions brewed to fit the requirements of the situation. But lack of all these is a more important reason since it strikes at the pride and intelligence of the scientist you seek to interest. The real reason is that the calibre of your technical effort has not been acceptable at scientific par.

What has been the result? Many representatives of your industry have been forced to rely on the statements of those who not only lacked the competence to produce controlled and reliable scientific evidence and interpret it correctly, but now in these changing times also lack the sagacity to recognize that the market for uncontrolled and unreliable data and immature and untrustworthy opinion is rapidly diminishing, except for those few who do not intend to remain long in the business. In common parlance, my friends, some of you have been gypped.

Great stress has been laid upon the need for research in your field and you may have expected me to devote my principal effort in attempting to convince you as to its necessity and value. It is such an important phase of industrial activity that no progress can be made without it. But research has been badly oversold, some have even gained the impression that research will, by some magical touch, render a compound less toxic or more efficacious in a quantitative manner.

I feel that it is more important to tell you that you can waste both time and funds in so-called research of improper design and that no amount of research will uncover merit in a worthless product. It should be one of the principal functions of the competent in-

KOMMON/ SCENTS!

Politics, as the cliche goes, makes strange bedfellows. And this is the time of the year when the Simmons Bedding Company should be making a fortune, especially when some candidates act as though they fell out of bed at an early age and landed on their heads.

●

In the Republican party, General Eisenhower is in the unhappy position of recognizing Senator Joe McCarthy as a party member. This puts McCarthy in the strange role of being embraced but without love.

●

In the Democratic party, Governor Adlai Stevenson makes his bid for the Presidency by dissociating himself from the New Deal and Fair Deal. By definition, this would seem to put him on the side of party members who crippled his history of both administrations.

●

Naturally, each candidate has a substantial rationalization for why he chooses such strange bedfellows. It has to do with such lofty thoughts as "loyalty," "teamwork," "gratitude" . . . and besides, it might help him get himself elected.

●

The General's deathless observation that he "will work with Congress, not against it," if elected, is matched in meaninglessness by the Governor's complaint that we should have "two-party" newspapers. Somebody should tell the General that the Chief Executive fights Congress only when Congress isn't interested in working with the Chief Executive; the Governor, that newspapers are supposed to be independent of both parties while evaluating all issues.

●

The Foreign Policy differences between Ike and Adlai are real charmers. One would never guess that ours is a Bi-Partisan Foreign Policy, the way each candidate arrogates to his party all the credit for the good things while generously alloting the other party all the blame for the bad ones.

●

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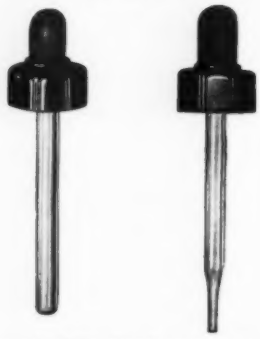

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vestigator and research advisor to correctly evaluate, a priori, whether the anticipated results, be they positive or negative, will justify the expenditure of time and funds. It is just as futile to engage in "research" which offers no prospect of obtaining tangible results as it is to neglect such activity when it is the most satisfactory if not the only possible solution to a problem.

Some years ago, two of my pharmacological colleagues and myself were invited to serve as a research advisory committee for the newly formed Therapeutic Research Foundation whose principal function was to aid small pharmaceutical industries, who did not operate on a sufficiently large scale to support their own technical staffs, in finding competent investigators in university laboratories or affiliated hospitals who would undertake to give proper scientific appraisal to their products. You are well aware of the activities of this group and the fact that it is not now in active operation. When my colleagues and I were first approached to assist in this activity, we carefully considered the implications of such a decision. The decision to accept this responsibility was based on the belief that your section of the industry should have available the same calibre of advice and your problems the same type of scientific consideration as those engaged in a less controversial area. We accepted this invitation in the spirit in which it was offered and at face value as a first step in the reorientation of your industry. The decision was made in the knowledge that we would be suspected, if not actually accused by our colleagues of abandoning our scientific principles. After due consideration, we concluded that our scientific standing and rectitude were a matter of record and that our position in American science and medicine was strong enough to discount this type of criticism and enable us to withstand pressures which would inevitably follow such a decision.

Our hesitancy may seem somewhat unreal to you unless you be acquainted with the historical background of the muddled thinking which dictated the policies of professional pharmacology until about fifteen years ago. Prior to this time a scientist was required to resign his membership in the American Society for Pharmacology and Experimental Therapeutics upon acceptance of a position in the pharmaceutical industry. It will be of interest to you to know that the present president of the Society, K. K. Chen, is the first industrial representative ever to hold this position in the forty-three year history of the Society.

The activities of the Foundation were not notably successful. It may be of some interest to you to know that a similar lack of success has characterized the activities of the Therapeutic Trials Committee of the Council on Pharmacy and Chemistry of the American Medical Association which was conceived on a broad base with a somewhat similar pattern of activity. Possibly the latter is more easy of explanation since industry has never been particularly interested in dealing through regulatory agencies even though they

be of a quasi-judicial character.

We are still somewhat puzzled as to the fundamental failure of the Foundation first, because we were impressed with the obvious need; second, because we knew we were in a position to place your products in the hands of those well-qualified to study them scientifically, and third, because it was our feeling, and still is, that the future of the proprietary industry is predicated upon an accurate scientific appraisal of the compounds with which it deals.

It will be of considerable interest to you to know, if you do not know already, that this same group of pharmacologists now stand as a Research Advisory Committee to the Institute for the Study of Analgesic and Sedative Drugs. This organization has actively supported investigations relating to the basic compounds of the analgesic and sedative group in leading American institutions for over ten years. These have yielded significant contributions to the knowledge concerning these substances.

From a pharmacological point of view, the long-range prospects in the field of chemical agents in the treatment of disease has fascinating possibilities. Many of these compounds will be suitable for use in home medication. Who can predict which way the trail may lead; we need a new and safe sedative and hypnotic to replace the barbiturates; we need a non-addicting analgetic which is more potent than aspirin; we need a safe and effective vascular dilator; and a wide variety of specific smooth muscle relaxers; we need means of effectively controlling the distribution and removal of ions from the body; to say nothing of a variety of anti-s, to mention only a few.

The public has come to expect that purveyors of drugs will come up periodically with new agents for relief of their maladies. Only in recent years has the proprietary industry recognized this fact and taken adequate cognizance of changing times.

I believe that the time is now ripe for the proprietary industry to claim its own, to raise itself by its own boot straps, so to speak, to set up as its motto "Home medication with safe and efficacious drugs."

Such a program may require junking of worthless and time-honored formulae in favor of newer and more effective agents; it may require the re-evaluation of old compounds which have been erroneously discarded because at the time they appeared to be less efficacious and more toxic than the new substances; it may require the large expenditure of monies for research; it probably will require that the industry as a whole put something "back in the pot," such, for example, as support for the training of graduate students with no expectation of gain except to the industry as a whole, thus accepting a pattern already established by the heavy chemical industry. It will mean re-evaluation of the long-range effects on the public of a merciless campaign of unpleasant and misleading auditory and visual propaganda. It will probably mean doing all those things which are necessary to bring the proprietary industry in its technical aspects up to scientific par.

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A Physician Looks at Proprietary Drugs

(Continued from page 471)

it is often difficult to determine whether or not a symptom indicates the presence of an underlying serious disease condition. The layman can easily appreciate and describe the discomforts which afflict him, but he frequently does not realize the import of his symptoms. As a general rule he is not capable of diagnosing disease. Some conditions, such as Athlete's Foot, can be diagnosed by the laity with a fair degree of ease and accuracy. However, the majority of signs or symptoms of disease are both subtle and insidious. They may even tax the diagnostic ability of the medical profession. Certainly one is well advised to call the physician when there appears to be any cause for concern. It behooves you to promote your products in such a manner as not to encourage that type of self-medication which is likely to result in serious harm. Obviously you cannot provide a "home medical guide" or extensive treatise on therapy to aid the consumer in making safe and intelligent use of each one of your products. On the other hand, you can avoid making promotional misrepresentations which are apt to foster dangerous self-medication. It is then up to the layman to exercise ordinary common sense in using your products. The individual who continues to rely upon self-medication while suffering severe or persistent symptoms must be regarded as a fool.

There are individuals who believe that most of the preparations marketed for over-the-counter sale have little or no value. It is true that certain home remedies have such weak pharmacologic action that they can hardly be classified as drugs. Nature rather than the medication must be given credit for the "cure" or recovery in many instances. Many remedies of bygone years have gallen into oblivion because they were eventually recognized to be lacking in drug action of any significance. I believe that an indication of the future of your industry may be gleaned from a study of past history. The "rattlesnake oil" and many alleged panaceas which enjoyed considerable popularity a generation ago are no longer available on the market. It is apparent that so-called medicines which lack pharmacologic action cannot survive. As businessmen you have recognized this fact and turned to the laboratory or clinic for guidance and advice. Undoubtedly, as you become interested in marketing new medicinal agents there will be an increasing trend in that direction.

New drugs are being introduced with ever increasing rapidity. In speaking of new drugs I am referring to the new compounds which are being developed in the laboratory and not to old drugs which have been "dressed up" with a new name or to the many mixtures of well known remedies which are constantly being introduced. What is your stake in the truly new developments in the drug field? It is my opinion that relatively few of these new drugs can be regarded as suitable for over-the-counter sale. You are well advised to proceed with extreme caution in any commercial entry into this

field. The cautious approach is not only desirable but necessary if you wish to avoid getting into trouble.

We must recognize that there has been a revolution in the field of therapeutics in recent years. Many of the new drugs being introduced are characterized not only by their potency or valuable therapeutic action but also by their ability in greater or lesser degree to produce harmful side effects. There is nothing unusual about this phenomenon. A drug capable of producing a desirable pharmacologic effect of any significance is also likely to produce one or more undesirable effects. The problem is one of determining whether or not the ill or harmful effects are outweighed to a significant extent by the probable therapeutic benefits. Pharmaceutical chemists are constantly endeavoring to alter the structure of drugs with the object of getting rid of those portions of the chemical molecule responsible for undesirable effects. The physician who employs these new therapeutic agents must exercise due care to insure that he is doing more good than any possible harm. In other words, anyone who utilizes a drug must be cognizant of the calculated risk which is involved.

In my opinion practically all new drugs should be marketed only for prescription sale at the outset. They must be tried and tested through wide use by the medical profession for a sufficient period of time before their true usefulness, limitations and harmful propensities are adequately ascertained. Only after that can consideration be given to the matter of their suitability for use in self-medication. Most of these new therapeutic agents will not be safe for unsupervised lay use. However, I have little doubt that some will be found suitable for over-the-counter sale. At the present moment we do not have a cure for the common cold. The so-called cold remedies which are now on the market at best can only be regarded as palliatives. It would seem likely, however, that if a safe and effective cure for the common cold is discovered it will be marketed for over-the-counter sale. We realize that the general public demands the right to practice self-medication. Furthermore, Congress, in enacting the Federal Food, Drug and Cosmetic Act, granted that right to the laity. Many physicians have been particularly critical of the promotional methods employed by some members of your industry. Not infrequently their criticism has been justified. I do not believe it is impossible, however, for a more harmonious relationship to develop between the proprietary industry and the medical profession in the future.

Cosmetics and Drug Stores

(*Continued from page 469*)

shabby her purse, her last dollar goes for that hat. But the ruthless Mrs. Consumer—she will never forget you, she will never forgive you, and, what's more, she will never let you forget it.

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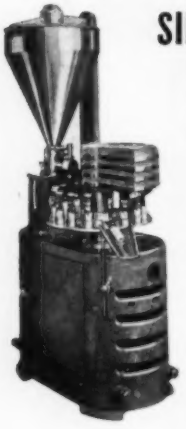

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cannot sell her properly if you are blindfolded and don't know which Mrs. Consumer you are selling."

With regard to selection of cosmetic merchandise to be sold in chain drug stores, Virgil H. Terry, toilet goods buyer for Cunningham Drug Stores, said:

"Brand names have been important in retail merchandising for more than a half century, but it is within the past ten or fifteen years that their importance has become paramount. Why? I think I can tell you briefly by reference to a few closely related facts. All of them have to do with the revolution which has taken place in the retail merchandising of non-durable goods.

"The most significant development in retail merchandising in our day has been the application of self-service in selling. Self-service began in variety stores early in the century, food stores in the 1920's, developed rapidly in the 1930's and 1940's. Self-service stores now do two-thirds of the grocery business in the United States and a growing share of the drug and toiletry business.

"The national brand is the one customers recognize, trust, and buy. With the complete freedom of choice which is the customer's when he enters the modern drug store or food stores, it is to the drug item and packaged food items made familiar through national advertising of their brand names that he is attracted. The customer, man or woman, knows that here is a product of which the manufacturer is proud. He stands behind it with his guarantee of quality. It is the tried and proven nationally advertised brand which the customer selects from those displayed.

"Strangely, the average customer is much more brand conscious in her purchase of toiletries or drug items than she is in the food she buys. When it comes to toiletries and drugs this brand consciousness is multiplied by as much as tenfold. Nationally advertised brands are the back-bone of the self-service drugless drug operation. What is true in the grocery supermarket is even truer in the super drug store, almost all of them utilizing the self-service principle in some departments.

"Nationally advertised brands attract planned purchase and produce sales. They play an even more important role in impulse buying. Obviously, all purchases are made in one of two ways—on plan or on impulse, an unplanned spot purchase is made in the retail outlet when the customer sees an item displayed and is reminded of a need or attracted by the article. These purchase decisions are definitely affected by the customer's previous exposure to and familiarization with the product through advertising.

"The consumer buys what has eye appeal, what is prominently displayed, and what he recognizes because he has been made familiar with and to some extent presold on the brand and its package by national advertising. With this knowledge of customer shopping habits so definitely proved, we must make every effort that our careful selection of the national brand is best suited to our store operations. Then we must further protect our selection of these national brands, by not

buying cat and dog items or off-brand lines, which will be in competition with them.

"We have found that there is a limit, however, to the number of items even in the preferred national brand lines, which we can stock and sell with a good rate of turnover. With the ever-increasing addition of new items being introduced into the major lines—we find it necessary to carefully screen them. We do this with the thought of preventing duplication of inventory. We are *just* as concerned with the prevention of slow-selling inventory of national brand 'fringe' items as we are with the elimination of off-brand cat and dog items. Some of our manufacturers have also appreciated the necessity of limiting the extent of items in their line. They recognize the fact that we must plan a shelf, drawer, or bin location for each new item which is brought into a store stock.

"With such mutual concern by retailer and manufacturer over adding items to even well-established nationally advertised lines—certainly it is obvious that off-brand items have no place whatsoever in present day merchandising programs. In spite of the absolute necessity of buying only nationally advertised treatment or fragrance lines, and avoiding the very bad risks involved in the purchase of off-brands, so far as heavy slow-selling stocks and questionable promotional activities is concerned.

"The downward trend of profit margin on the national keeps constantly rearing its head. A higher gross profit than is now generally earned on national brands is of paramount importance today. Our suppliers must recognize that our costs of doing business have risen just as proportionately in the past few years, as have theirs. The recent trend by manufacturers to increase costs without permitting a proportionate increase in retail is a trend which we cannot live with. Toilet goods merchandise has the history of being manufactured to a retail, today such retails are fixed, and our manufacturers have frozen the margin of profit. So the consideration of own brand goods is recurring more and more often.

"We know that national advertisers have always taken the position that own goods merchandising should not be a part of their major resources' program. In this regard, there must be a clear distinction made between cats and dogs—off brands—and own goods. These 3 classifications are not one and the same thing.

"An aggressively merchandised own brand line has an excellent potential in today's modern drug store operation—much more than would have been thought possible 5 years ago. By very reason of our continuous elimination or suppression of cats and dogs and off brand lines these formerly were only purchased . . . not merchandised. However, if the frozen profit condition on national brands continues, then there must be a new source of profit developed.

"At the moment, however, with a lack of such a new profit source, we must do our utmost to streamline inventories and reduce operational costs, so as to realize a greater percentage of net from the available frozen gross profit now allowed us."

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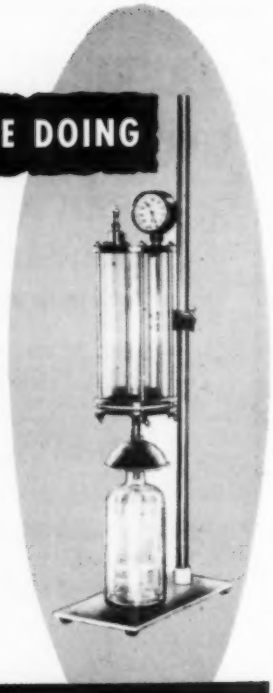

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Influence of Lay Press on Prescriptions

(*Continued from page 477*)

is definitely toward more exciting developments which lend themselves to articles in the lay press. This point is further dramatized when you learn that almost four out of every five prescriptions are for pharmaceutical specialties. It is no wonder, then, that the public so conscious of protecting its health, finds a great deal of encouragement in the good news of medicines achievements.

Pharmaceutical Products and Prices

(*Continued from page 463*)

One main factor in the present condition of huge plant capacity for pharmaceuticals is the loss of a very large part of the foreign markets. The erection of plants abroad for the production of antibiotics is particularly responsible for the idle plant capacity in this country for the production of antibiotics. And as often as this country brings out still more important drugs which are original in this country, and then sets out to build plants in this country to supply the entire world with these drugs, just so often will they be in the same predicament as foreign countries establish their own capacities for producing these drugs, and then seek to supply not only themselves, but other countries as well. In the case of antibiotics exportation by foreign countries even reached the point at which penicillin was being offered to the United States at prices below the then list prices in this country. Subsequent price cuts took care of this situation but this did not help the manufacturers in this country because these price cuts brought prices down to the point at which any profit from the item had just about vanished.

Continuous lowering of prices for important medicinals as their use expands, as research leading to their development is paid for, and as plants are amortized, is a healthy thing for the industry. After all pharmaceutical manufacturers are in existence for only one purpose and that is to produce products which will benefit the health of all people and to get these products into the hands of all who need them. Getting these products into the hands of all who need them naturally calls for consistent effort on the part of manufacturers to bring costs of production and distribution, as well as profit down to the irreducible minimums. By maintaining such policies, pharmaceutical manufacturers become a most stable part of our economy that cannot be dislodged by any radical ideas.

However, this process of lowering prices should be conducted in orderly fashion and price cuts should only be made as investments are paid off and as true economies in production and distribution are made. The lowering of prices, often to cost or below, as the result of price wars is not good for the industry nor for the people who depend on the industry for maintenance of their health.

Foundation Creams and Lotions

(*Continued from page 467*)

could accomplish these desired functions. The recent large amount of work done on the development of ore floatation agents of great specificity also greatly broadens the scope of investigation. No specific formulation could be advanced that would cover the large number of different qualifications desired. However, by thinking of the system as a combination of conflicting functions balanced against each other to make an harmonious whole, the formulator could arrive at his final product through empirical formulation and reasoning.

In line with products of this type and because of the constant new materials appearing we can hardly feel that the ultimate has been reached. Improvement of facial appearance is one of the principal reasons for the existence of cosmetic firms. With the advent of new types of color reflectors and with easier methods of incorporation we can expect a great deal more in the near future.

Urinary Antiseptics

(*Continued from page 473*)

thought that this antibiotic would be a valuable agent against the Gram-negative organisms which are responsible for the majority of urinary tract infections. Unfortunately, streptomycin's effectiveness is offset by its toxic properties and the rapidity with which susceptible organisms become resistant to it.[11] Nonetheless, streptomycin is a very useful agent for the treatment of urinary tuberculosis.[2] It is also used in other urinary infections that have failed to respond to treatment. Shaw[9] stresses, however, that streptomycin should be received for the most refractory type of urogenital Gram-negative bacillary infection. With many physicians, streptomycin has been replaced by dihydrostreptomycin which shows somewhat lower neurotoxic tendencies.

A similar story will probably be written about chloramphenicol (Chloromycetin). Several workers[6,18,19,20] had reported on the effectiveness of this antibiotic in the treatment of resistant Gram-negative bacillary infections. It had been listed as the drug of choice against some organisms.[5,14] Now, in the light of recent events, all this is perhaps academic. A number of recent reports[21-24] indict chloramphenicol as a cause of death from aplastic anemia. As a result, the use of this drug will, no doubt, be greatly restricted.

Aureomycin, a broad spectrum antibiotic, has found an important place in the treatment of acute and chronic urinary tract infections. Active against both Gram-positive and Gram-negative organisms, the drug has proved most useful in the therapy of infections that have developed resistance to other antibiotics.[13,25] Carroll and his colleagues[8] observe that, although aureomycin is useful in some coccal infections, its greatest value is found in the treatment of bacillary infections. Other workers[26,27] call particular attention to the effectiveness of the antibiotic for aerobacter aerogenes

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infection of the urinary tract. Other drugs are relatively ineffective against the aerogenes organism.

In his report on his experiences with aureomycin in urinary infections, Brettler[28] stated that with the use of this agent most patients could be discharged with sterile urine. Their fever rapidly subsided and the duration of treatment and of hospitalization was shortened. He noted that aureomycin is almost nontoxic but undesired effects are observed occasionally. In this connection, Nesbit and Baum[16] have remarked that toxic reactions, while minimal, are annoying and consist mainly of nausea and diarrhea. The nausea has been found to respond to the simultaneous administration of aluminium hydroxide preparation with each oral dose of aureomycin, while the diarrhea is usually controlled by routine constipating measures.

Although it is a comparative newcomer, terramycin has proved itself to be a valuable agent for treating urinary tract infections.[11] The drug is effective against a wide variety of organisms, being particularly useful against penicillin-resistant cocci and Gram-negative bacteria. In clinical studies which showed its effectiveness against various infections, including those of the urinary tract, there was a low incidence of side reactions, most of which were mild and subsided with continued treatment.[29] Only in rare instances were the toxic reactions so severe as to require discontinuance of terramycin therapy.[30]

Indicating the value of terramycin are the studies made by Womack and his colleagues[31] in 112 patients with acute and chronic infections of the urinary tract. Following administration of the antibiotic, pyuria diminished or disappeared in about half the patients, more frequently in acute cases. Fever and local symptoms were favorably influenced in more than half the cases, but in some the improvement was only temporary. Considering the laboratory and clinical findings, the investigators concluded that about one-half the patients were benefited by the terramycin therapy.

In another study, Blahey[32] noted that terramycin therapy produced a significant decrease in the postoperative pyuria associated with major gynecologic operations. More recently, on the basis of clinical comparisons of various antibacterial agents, Lazarus and Wood[12] expressed the opinion that, when used in sufficiently large doses terramycin gives "gratifying" results in resistant urinary tract infections.

The potentialities of other antibiotics have been studied. Polymyxin, for example, has a pronounced effect against some of the Gram-negative bacteria found in urinary infections. Although many workers[16,33,34] speak highly of the drug's antibacterial action, they also call attention to its rather frequent toxic effects. Hence, physicians hesitate to use polymyxin except in highly resistant infections, such as those due to the Pseudomonas organism.[13,17] Since the nephrotoxic and neurotoxic effects are thought to be due to impurities, some workers[9,35] have expressed the hope that refinement of the drug will extend its usefulness.

As remarked by Rhoades and his colleagues[8], toxic

considerations similarly limit the usefulness of bacitracin and neomycin. Neomycin, which is still under investigation[5], may be useful in Pseudomonas or resistant coli infections.[14]

Nowadays, when the emphasis seems to concentrate on antibiotics, it is interesting to note that the sulfonamides still rate a high place in the treatment of urinary tract infections. Indeed, according to Kimbrough[17], the sulfonamides are the agents most frequently used in combating urinary infections. Moreover, as noted in one report[5], the sulfa drugs are more effective against a greater variety of organisms invading the urinary tract than are most of the antibiotics.

In the opinion of Nesbit and Baum[16] the sulfas remain the drugs of choice in the initial trial of therapy in uncomplicated cases. They have a wide range of effectiveness, says he, are easy to administer and are relatively inexpensive. In a similar vein, Shaw[9] points out that the sulfonamides will cure 93 per cent of the Gram-negative bacillary urinary infections. Since these organisms are the cause of approximately 85 per cent of the infections, the sulfas are the logical drugs to use first because they are usually well tolerated, can be taken by mouth, and are not costly. Citing a slightly higher figure, Helmholz[36] similarly notes that probably more than 95 per cent of all urinary infections are caused by Gram-negative bacilli; all of which are susceptible in varying degree to sulfa therapy.

Many authorities[4,21,26,35] consider sulfadiazine to be the sulfa preparation of choice because it is effective, usually well tolerated, and fairly soluble. It may be used alone or in combination with other sulfa drugs, such as with equal parts of sulfamethazine or sulfamerazine. According to Fetter,[2] a combination of sulfadiazine, sulfathiazole and sulfamerazine has proved to be of greater value than any of the drugs used alone. He points out that combination sulfa therapy is less toxic, with the hazards of crystalluria reduced to a minimum. Many of these compounds or mixtures for infants and children are combined with an alkalinizing agent. With such preparation, the probability of renal irritation is lessened and the course of the infection may be shortened.

During the last few years, a number of workers[37,38,39] have reported favorably on the efficacy of a new sulfa drug in the treatment of urinary infections. Chemically designated as 3,4-dimethyl-5-sulfanilamido-isoxazole, but available as Gantrisin, this drug has the advantage of a high degree of solubility and low toxicity. Because of its solubility, there is no crystallization in the urine when the drug is given in therapeutic doses.[40] Crystallization is not seen in either an acid or an alkaline urine. Investigations by Carroll and his associates[6,41] indicate that the drug is effective in urinary infections due to Escherichia coli, Proteus and Alcaligenes. They consider it the drug of choice in Proteus infections, since the organism is not highly sensitive to any of the antibiotics.

Reviewing their own experiences and the findings of others, McMartin and Milam[13] stated that Gantrisin,

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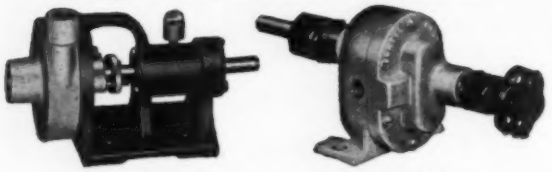

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with its wide antibacterial spectrum and decreased toxicity, appears to be one of the "safest and most effective agents", in both the office and hospital treatment of urinary infections. At present, they use this drug almost to the exclusion of the other sulfonamides. Similarly indicative of the status of this new sulfa is the statement by Rhoades and his colleagues[8] that Gantrisin appears to be the sulfonamide of choice in most urinary tract infections. Where indicated, they use Gantrisin in combination with various antibiotics.

They have found that a combination of two therapeutic agents often will be more effective than a single one, especially in infections due to more than one organism. As pointed out by Hinman,[14] the purpose of using such drug combinations are: (a) to attain rapid control of the infection, (b) to decrease the development of resistance, (c) to decrease dose-related toxicity, and (d) to precent superimposition of infection. Clinically, says he, drug combinations are indicated in fulminating infections, infection by relatively resistant organisms, chronic or recurrent infections, acute infections in which the expected response is not obtained within 48 hours, and, of course, in mixed infections. Recently, in commenting on the good clinical response obtained in combined sulfa-antibiotic therapy, Kimmelman, Zinsser and Klein[42] stressed that if such therapy is to be of permanent value, efforts must be made to remove any cause of obstruction or complication.

Although they have been replaced to a large extent by the antibiotics and the sulfas, certain of the older type urinary antiseptics still retain a useful place in the treatment of urinary tract infections. Methenamine, for example, continues to be a useful drug in certain persistent Gram-negative bacillary infections. Its efficacy depends on formaldehyde which is split off in urine made acid by the simultaneous administration of ammonium chloride or sodium acid phosphate.[13] Despite a rather low bactericidal action, methenamine is indicated in infections due to Escherichia coli which have become resistant to streptomycin and the sulfonamides or where sensitivity to these agents exists.[4]

Mandelic acid, calcium mandelate and other derivatives of mandelic acid are also widely used in chronic urinary infections in which the organism has become resistant to sulfa drugs and antibiotics.[17] Besides being frequently effective in various common infections, notes Hawksley[10], the mandelates are superior to the sulfonamides when the responsible organism is Streptococcus faecalis.

Mandelamine (methenamine mandelate), which combines the action of methenamine and mandelic acid, is also a valuable urinary antiseptic. According to Carroll and his colleagues[6], it is nontoxic, well tolerated, and easy to administer. It is effective against a high percentage of the organisms found in the urinary tract, providing the urine is kept in an acid condition. These urologists have used Mandelamine in many types of urinary infection, especially in patients who are not under constant observation, such as those who have

undergone prostatic surgery or operations for urinary calculi.

Other workers[2,43-46] have reported favorably on the use of Mandelamine in various urinary tract infections. Hinman[14], for example, has recently remarked that the combined-action preparation is particularly useful in long-standing infections in which permanent sterilization cannot be expected because an obstruction or stone cannot be eliminated.

Pyridium (phenylazo-diamino-pyridine hydrochloride) is another "old timer" that still enjoys wide popularity.[2] Pyridium has an analgesic effect on the mucosa of the urinary tract and thus provides soothing relief of such symptoms of urogenital infection as dysuria, burning on urination, frequency, and nocturia.[47] This relatively nontoxic drug is bacteriostatic, but it is scarcily bactericidal. Hence it is used in conjunction with antibiotics and sulfas to provide symptomatic relief and corrective action. The fact that Pyridium gives a reddish color to the urine is said[17] to produce a beneficial ocular psychic effect on the patient.

Sometimes the arsenicals are called into use. Neoarsphenamine, for example, may be used in resistant coccal infections.[4] This drug or Mapharsen (oxophenarsine hydrochloride) are of value in the treatment of abacterial pyuria.[13,17] Neoarsphenamine is a useful remedy in the treatment of a form of nonspecific urethritis and prostatitis. According to Fetter,[2] many soldiers developed such conditions during the war and the arsenicals are the only known specific remedy for them.

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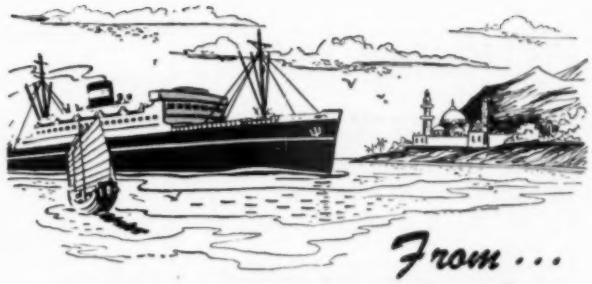

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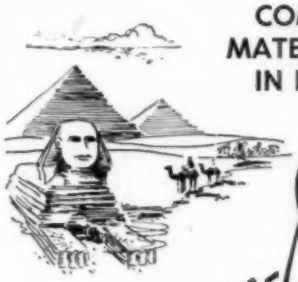

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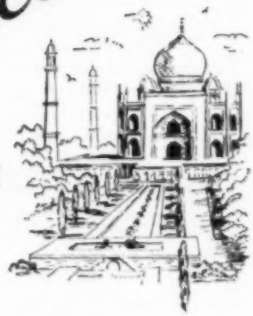

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ADVERTISING INDEX

Aceto Chemical Co., Inc. 550
Advertising Plastics Company 552
American Cholesterol Products, Inc. 536
American Druggist 438-439
Armstrong Cork Company Insert facing 481
Atlas Powder Co. 449
Avon Products, Inc. 433

Baker, H. J. & Bro. Insert facing 433
Baker Chemical Co., J. T. 494
Beauty Fashion 436
Beckman Instruments, Inc. 548
Benzol Products Company 552
Braun, W., Co. 551
Brown Bag Filling Machine Co., Inc. 558
Bush & Co., W. J. 538

Calco Chemical Division 524
Calumet Manufacturing Co., Inc. Insert facing 489
Carbide & Carbon Chemicals Co., A Division of Union Carbide & Carbon Corp. 443
Carr-Lowrey Class Co. 493
Cavalla, Inc., A. 560
Charabot & Co., Inc. 500
Columbia-Southern Chemical Corp. 440
Commercial Solvents Corp. Insert facing 441
Continental Can Company 482
Cross Paper Products Corp. 491
Crown Can Company 484-485
Crown Cork & Seal Company 478

de Laire Division, Dodge & Olcott, Inc. 437
Devoid Oil Co., Peder 547
Distillation Products, Inc. 452
Dodge & Olcott, Inc. 442
Dow Chemical Co. 502, 514
Drug & Cosmetic Review 492
Durlin & Co. Insert facing 453

Ertel Engineering Corp. 551, 560

Fairmount Chemical Co., Inc. 563
Felton Chemical Co., Inc. Insert facing 449
Firmenich & Co., Inc. Cover 4
Florasynth Labs., Inc. 453
Foster-Forbes Glass Company Insert facing 496
French, Inc., Benj. 541
Fritzsche Bros., Inc. Insert bet. 528-529

Gair Co., Inc., Robert Insert facing 504
Givaudan-Delawanna, Inc. Insert bet. 440-441
Glass Products Co. 550
Glycerine Producers' Assn. 526
Goldschmidt Chem. Corp. Insert facing 456
Greeff & Co., R. W. 548
Gross, A. & Co. 429

Hanovia Chemical & Mfg. Co. 536
Haring Equipment Corp. 554
Hercules Powder Company Insert facing 440
Heyden Chemical Corp. 498
Hoffmann-La Roche, Inc. 534
Hormann & Co., F. R. 556
Horn, John 560
Huisking & Co., Inc., Chas. L. 547

Inland Alkaloid Co. 556
Innis-Speiden Company 430

Kelton Cosmetics Co. 549
Kessler Chemical Co. 538
Kimberly-Clark Corp. 486
Kimble Glass, Division of Owens-Illinois Glass Company Insert facing 497
Kohnstamm, H. & Co. Insert facing 448
Kolar Laboratories, Inc. 444
Kolmar Laboratories 435

Leonhard Wax Co., Theodore 563
Lueders & Co., George 522
Lusteroid Container Co., Inc. 545

Magnus, Mabee & Reynard, Inc. 425
Mallinckrodt Chemical Wks. Insert facing 457
Merck & Co., Inc. 516
Michel & Co., Inc., M. 555
Monsanto Chemical Company 431

Naugatuck Aromatics 446
Neumann, Buslee & Wolfe, Inc. 561
New Jersey Zinc Co. 544
New York Quinine & Chemical Works, Inc. 447
Norda Essential Oil & Chemical Co. 543, 546, 554, 557

Old Empire Mfg. Chemists, Inc. 546
Orbis Products Corp. Insert facing 452
Owens-Illinois Glass Co. Insert facing 488 and 505

Parsons-Plymouth, Inc., M. W. 541
Penick & Co., S. B. 450
Pennsylvania Glass Products Co., Inc. 487
Pennsylvania Refining Co. 520
Pfaltz & Bauer Co., Inc. 563
Pfizer & Co., Inc., Chas. 454
Pittsburgh Lectrodryer Corp. 508
Plax Corporation, Subsidiary of Emhart Mfg. Co. Insert facing 480
Polak & Schwarz, Inc. 530
Polak's Frutal Works 445
Prince 555
Progressive Labelling Machine, Inc. 563
Pulverizing Machinery Company Insert facing 513

Richford Corporation 490
Ritter & Company, F. 553
Roure-Dupont, Inc. 456

Santonin Company of America, Inc. 547
Scandia Manufcturing Co. 563
Schimmel & Co., Inc. 455
Solvay Process Division, Allied Chemical & Dye Corp. 451
Sonneborn Sons, Inc., L. 428
Standard Oil Company 427
Standard Pharmacal Company 559
Sterwin Chemical, Inc. 563
Stokes Machine Co., F. J. 506
Stokes & Smith Co. Insert facing 512
Strong Cobb & Co., Inc. Insert facing 432
Sunkist Growers 518
Synfleur Scientific Labs., Inc. 434
Syntomatic Corp. 448

Tablet Coating 510
Tamms Industries, Inc. 563
Thurston & Braidich 559
Toledo Scale Co. 553
Tombarel Products Corp. 432

Ungerer & Co., Inc. Cover 3
Union Carbide & Carbon Corp., Carbide & Carbon Chemicals Co. 443
U. S. Bottlers Machinery Co. 543
U. S. Industrial Chemicals, Inc. Insert bet. 436-437

van-Ameringen-Haebler, Inc. Insert bet. 432-433
Verley & Company, Albert Insert bet. 428-429
Verona Chemical Company 441

Welch, Holme & Clark, Inc. 542
Whittaker, Clark & Daniels, Inc. 557
Will & Baumer Candle Co. 558
Witco Chemical Co. 564
Wolf, Jacques & Co. 543
Wyandotte Chemicals Corp. Cover 2